

THE DEVELOPMENT AND USE OF ENGLISH MODAL AUXILIARIES  
IN CHINESE EFL LEARNERS

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## Abstract

Altogether 360 Chinese secondary school students who are learning English as a foreign language participated in a written test focussing on the use of English modal auxiliaries. The test was composed of two parts: translation of 35 sentences and multiple choice of another 35 sentences. Starting from a semantic point of view, the test was designed to examine the developing ability of Chinese EFL learners to use English modal auxiliaries in a formal learning setting. The resulting data was analyzed both quantitatively and qualitatively.

Several interesting findings have been obtained. First, it is recognized that English modal auxiliaries are a difficult grammatical category for Chinese EFL learners. The difficulty lies not only in the correct choice of modal forms expressing particular modal notions, but also in the formation of target-like modal verb phrases. Secondly, a tentative learning sequence is observed in terms of modal verbs expressing different modal notions. Root modals are mastered better than epistemic modals. This coincides with the fact that in L1, root modals are reported to be acquired before epistemic modals. Among the first-mastered modals are those expressing ability, volition, permission and obligation. Thirdly, a few recurrent semantic and syntactic error patterns are found in the students' use of English modal verbs. The sources of these errors can be traced to inter- or intra-lingual transfer, one of the determining factors for interlanguage development.



## List of Tables

Table 2.1	Membership of the English Modal System.....	15
Table 2.2	Extracted Data on L1 Modal Acquisition (Wells 1979).....	39
Table 2.3	Extracted Data on L1 Modal Acquisition (Perkins (1983)).....	42
Table 3.1	Correspondence between English and Chinese Modal Expressions.....	70
Table 4.1	Total Mean Accuracy Scores in TR and MC.....	84
Table 4.2	Oneway ANOVA for Total Mean Accuracy Scores.....	85
Table 4.3	Comparison of Modal Performance between Grades.....	86
Table 4.4	t-test of TR Mean Scores and MC Mean Scores.....	86
Table 4.5.	Mean Accuracy Scores for Root and Epistemic Modals.....	88
Table 4.6	t-test of Students' Performance in Root and Epistemic Modals.....	88
Table 4.7	Mean Accuracy Scores for Root and Epistemic Modals in the Unexpanded and the Negated Areas .....	89
Table 4.8	t-test of Mean Accuracy Scores for Root and Epistemic Modals in the Unexpanded Area.....	90
Table 4.9	t-test of Mean Accuracy Scores for Root and Epistemic Modals in the Negated Area.....	90
Table 4.10	Mean Accuracy Scores for Individual Modal Meanings.....	91
Table 4.11	Mean Accuracy Scores in the 4 Syntactic Areas.....	93
Table 4.12	Correct Choice of Modal Forms Expressing Modal Meanings in the Unexpanded Area.....	96
Table 4.13	Frequency Distribution of Forms Expressing Tentative Inference in the Unexpanded Area.....	98

Table 4.14 Frequency Distribution of Forms Expressing Weak Obligation in the Unexpanded Area.....98

Table 4.15 Frequency Distribution of Forms Expressing Hypothesis in the Unexpanded Area.....99

Table 4.16 Omission of the Copula in the Unexpanded Area.....101

Table 4.17 Correct Choice of Modal Forms Expressing Modal Meanings in the Negated Area.....102

Table 4.18 Frequency Distribution of Forms Expressing Negated Confident Inference.....103

Table 4.19 Frequency Distribution of Forms Expressing Negated Epistemic Possibility.....103

Table 4.20 Frequency Distribution of Forms Expressing Externally Negated Strong Obligation.....104

Table 4.21 Frequency Distribution of Forms Expressing Negated Root Possibility.....105

Table 4.22 Omission of the Copula in the Negated Area.....106

Table 4.23 Total Distribution of Modal Co-occurrence Errors...107

Table 4.24 Frequency Distribution of Response Types in Modal Progressives.....109

Table 4.25 Frequency Distribution of Response Types in Modal Perfectives.....111



### List of Figures

Figure 2.1	Classification of the English Modal Verbs.....	20
Figure 2.2	Relationship between Modal Forms and Meanings.....	23
Figure 3.1	Description of the Subjects.....	66
Figure 3.2	Working Chart for the Test Items.....	78
Figure 3.3	Distribution of items in terms of Modal Meanings.....	79
Figure 3.4	Distribution of Items in Terms of Syntactic Co-occurrence Patterns.....	79
Figure 4.1	Development of English Modal Usage across the 6 Secondary Levels.....	84
Figure 4.2	Mastery Scale of Modals Expressing Different Modal Meanings.....	92

## Table of Contents

Acknowledgement.....	i
Abstract.....	ii
List of Tables.....	iii
List of Figures.....	v
Table of Contents.....	vi
CHAPTER 1 INTRODUCTION	
1.1. The Problem.....	1
1.2. Purpose and Significance of the Study.....	6
1.3. Organization of the Study.....	9
CHAPTER 2 LITERATURE REVIEW	
2.1. Introduction.....	10
2.2. Complexity of the English Modal System	
2.2.1. Syntactic Characteristics of English	
Modal Auxiliaries.....	11
2.2.2. Semantics of English Modal Auxiliaries.....	16
2.2.3. Interactions of English Modal	
Auxiliaries with Negation.....	24
2.2.4. Interactions of English Modal	
Auxiliaries with Tense and Aspect.....	31
2.2.5. Summary.....	34
2.3. Earlier Studies on Acquisition of Modal	
Auxiliaries in L1	
2.3.1. Major's Study (1974).....	35
2.3.2. Wells' Study (1979).....	37
2.3.3. Perkins' Study (1981).....	41
2.3.4. Other Relevant Studies.....	44
2.3.5. Summary.....	45
2.4. Transfer as a Determining Factor for	
Interlanguage Development	
2.4.1. Contrastive Analysis Hypothesis.....	46
2.4.2. Loss and Resurgence of Interest in	
Language Transfer.....	50
2.4.3. Transfer from a Markedness Perspective.....	52
2.4.4. Extension of Language Transfer.....	58
2.4.5. Summary.....	60



CHAPTER 3	METHODOLOGY	
3.1.	Selection of the Research Design and Type of Data...	62
3.2.	Subjects.....	65
3.3.	Construction of Elicitation Instruments.....	67
3.3.1.	Translation Task.....	68
3.3.2.	Multiple Choice Task.....	72
3.4.	Characteristics of the Test Design.....	74
3.5.	Data Collection and Data Processing.....	80
CHAPTER 4	RESULTS	
4.1.	Results of General Quantitative Analyses.....	83
4.1.1.	General Performance of the Modal Usage.....	83
4.1.2.	Modal Performance in Terms of Meaning Categories.....	87
4.1.3.	Modal Performance in Terms of Syntactic Areas.....	93
4.2.	Results of Specific Analyses.....	95
4.2.1.	The Unexpanded Area.....	96
4.2.2.	The Negated Area.....	101
4.2.3.	The Progressive Area.....	108
4.2.4.	The Perfective Area.....	110
4.3.	Summary.....	111
CHAPTER 5	DISCUSSION	
5.1.	English Modal Verbs as a Learning Burden.....	113
5.2.	Root Modals vs Epistemic Modals.....	117
5.3.	Modal Comprehension vs Modal Production.....	121
5.4.	Profile of Major Semantic Errors and the Transfer Account.....	126
5.5.	Profile of Major Syntactic Errors and the Transfer Account.....	135
CHAPTER 6	CONCLUSION	
6.1.	Purpose Fulfilled.....	146
6.3.	Pedagogical Implications.....	148
6.4.	Limitations of the Present Study.....	151
6.5.	Suggestions for Future Research.....	153
NOTES.....		154
Appendix I		
The Elicitation Test.....		159
Appendix II		
Key to the Elicitation Test.....		166

Appendix III	
Instructions for the Elicitation Test (Translated into English).....	168
Appendix IV	
Instructions for the Administration of the Test (Chinese Version).....	170
Appendix V	
Instructions for the Administration of the Test (English Version).....	171
Appendix VI	
Total Scores for the Choice of Modal Forms and the Formation of Modal Verb Phrases.....	172
Appendix VII	
A Sample Score Sheet.....	174
Bibliography.....	175



## Chapter 1

### Introduction

#### 1.1. The Problem

The early seventies marked the beginning of various empirical researches into second language acquisition<sup>(1)</sup>, a central area of research in applied linguistics. Since then, researchers have been working hard to gain insights into the developmental process of second or foreign language learning, the nature of interlanguage<sup>(2)</sup>, the strategies for achieving native-like competence, the determining factors for second language acquisition (SLA) and even language universals. However, such SLA studies have in the past been limited, by and large, to specific grammatical features or syntactic processes such as inflectional morphemes (Dulay and Burt 1973, 1974a, Bailey, Madden and Krashen 1974, Larsen-Freeman 1976, Krashen et al. 1978), negation (Ravem 1968, Milon 1974, Cazden et al. 1975, Wode 1976, 1980, Hyltenstam 1977, Adams 1978, Butterworth and Hatch 1978), and interrogation (Ravem 1974, Cazden et al. 1975, Shapira 1978, Adams 1978, Butterworth & Hatch 1978) and, more recently, relative clauses (Cook 1973, Schumann 1980, Gass 1980). Very few studies have focused on the development of the members of a given grammatical category, such as prepositions, determiners, tense - aspect system, and modal system.



The reason for this phenomenon is not hard to find. As we know, early studies in SLA, inspired by "Roger Brown's now classic longitudinal study of the acquisition of English as a first language" (Dulay, Burt and Krashen 1982), were modelled on early L1 acquisition studies, which emphasized grammatical morpheme inflections, negation and interrogation. In fact, "SLA continues to feed methodologically and theoretically off L1 acquisition research" (Ellis 1985). Many of the researchers involved in SLA have also worked in first language acquisition projects. They have used similar methodologies and analyses to compare the data to find out similarities and differences between first and second language acquisition. Since very few studies have been done on a certain grammatical category in first language acquisition and since early SLA studies were derivative of first language research, it follows that relatively few SLA studies can be found on the development of the membership of a given grammatical category, such as the English modal auxiliary system.

In order to redress the balance a little and to increase our knowledge of the evolution of the modal usage in second language learners, the present study was designed. It was an attempt to investigate the development and use of English modal auxiliaries in Chinese EFL learners across the secondary spectrum, i.e. from Secondary 1 through Secondary 6.



By modal auxiliaries, we here mean a closed class of ten modal verbs (3), i.e. CAN, MAY, MUST, WILL, SHALL, COULD, MIGHT, WOULD, SHOULD, OUGHT TO. Since they are auxiliaries and must be combined with other main verbs to form modal verb phrases functioning as the predicate, we will examine not only the use of the modal form itself, but also the use of modal verb phrases.

The impetus for this study grew out of three considerations. The first is the importance of "modality" in language use. Since the time of Aristotle, the concept of modality has interested many philosophers and has been subjected to constant examinations and reformulations. It has also attracted the attention of linguists who are concerned with and have taken pains to address the issue of linguistic expressions of modality. The linguistic study of modality is still full of vitality. The reason behind it may be largely due to the linguists' profound awareness that the function of language is first and foremost communication. As a semantic notion, modality, which "operates in a great deal of everyday language-behaviour" (Lyons 1977, p. 849), refers in a general way to the speaker's attitudes, opinions, judgements, intentions, obligations and the like -- thoughts rather than real life. Since much of our human interaction is concerned with just such concepts, one might argue that understanding modality means a good understanding of human language. It is therefore important



to master the modal usage if good communication is to be maintained.

Modality can be expressed through a variety of linguistic expressions and devices. As Perkins (1983) points out, there are, in English, various syntactic items available for the expression of modality. These include modal auxiliaries, quasi-auxiliary modal expression, adjectival, participial and nominal modal expressions, modal adverbs and modal lexical verbs. Of all the modal expressions just mentioned, the syntactically distinct class of modal auxiliaries is the most important because of its high frequency and expressive force. Lyons (1977) observes that "The modal auxiliary verbs occupy a more central position in the grammatical structure of English than do modal adjectives, or adverbs", hence the focal concern of linguists for modal auxiliaries. This points to the fact that a mastery of English modal auxiliaries is of great importance to EFL learners if they aim at a good command of English and near-native competence. To researchers, it is equally important to know how EFL learners learn and use this grammatical category if they want to get some ideas about EFL learners' interlanguage development in the realm of modality.

The second consideration concerns the claims of many grammarians and linguists that the English modal system is a difficult area both descriptively and pedagogically. For



example, F.R. Palmer, asserts from a linguistic point of view that "there is, perhaps, no area of English grammar that is both more important and more difficult than the system of the modals" (Palmer 1979). Coates, who has done a detailed semantic study on English modal auxiliaries, describes the English modal system as "an area of linguistics of such subtlety and complexity" (Coates 1983, p. 26). From a pedagogical point of view, Cook (1978) and Bowen and McCreary (1977) state respectively that English modal verbs constitute a considerable learning problem for the student of English as a foreign language, because of individual modals' uniqueness in their structural-semantic distribution. Dušková (1969) also observes that "All Czech teachers of English will confirm that most Czech learners have great difficulty with modal verbs." Their claims aroused my interest in finding out empirically whether Chinese EFL learners really find the English modal system difficult to master and how they learn to use this complex system in a formal learning setting.

The third consideration comes from the present researcher's observation of Chinese EFL learners' modal performance. Having taught English as a foreign language for years in a language institute, the present researcher has come to the conclusion that many Chinese students often make errors of one kind or another in their use of modal verbs. They are likely to misunderstand some modal verbs and tend to use them either in a semantically inappropriate or a syntactically improper way. But



how serious is the problem? Exactly what types of semantic or syntactic errors do Chinese EFL learners tend to make? Does every modal cause a learning problem? What are the error patterns? Is there a certain sequence of development in the use of English modal verbs? What are the factors contributing to the interlanguage development of English modal auxiliaries? To find answers to these questions, an empirical study was conceived and conducted.

## 1.2. Purpose and Significance of the Study

Generally, the present study is an attempt to investigate and describe the development and use of English modal verb phrases in Chinese EFL learners across the whole range of secondary school levels. Specifically, the study aims to explore the following research questions:

1. Does the English modal system present learning difficulty to Chinese EFL learners in a formal learning setting?
2. In what way is the modal development in L2 similar to that in L1?
3. Is there an ordered development in the expression of modal meanings?
4. What problems do Chinese EFL learners have when employing modal verbs for the expression of various modal meanings?
5. Is there a patterned development in the use of



unexpanded modals(4) and expanded modals(5)?

6. What problems do Chinese EFL learners encounter in manipulating English modal verb phrases in different syntactic environments?
7. What are the possible determining factors for modal usage in Chinese EFL learners, i.e. what affects the learner's mastery of English modal auxiliaries?

The significance of the study is three-fold. Firstly, from a pedagogical point of view, getting an idea of the development and use of English modal verbs in Chinese secondary school students will no doubt direct the teacher's attention to those difficult spots or those spots where errors are likely to occur, so that he might take care in his teaching to overcome the inherent difficulty and, hopefully, even avoid those possible errors. In addition, such a knowledge may help the teacher to make informed proposals for the development of teaching materials and teaching techniques. Hence, improvement is expected on the teaching and learning of the English modal verbs.

Secondly, the present study will examine one particular issue related to the SLA theory, i.e. the idea of what underlies interlanguage development. So far, a number of empirical studies have been done, from various/different perspectives, to examine the determining factors for SLA, and many theories and hypotheses



have been proposed. The present research will try to apply the transfer account to the study of the acquisition of modal auxiliaries in SLA.

Thirdly, this study will add some information to the existing literature on the learning of English as a foreign language in the Chinese context, thus making a small contribution to the SLA research. Some researchers have carried out experiments on Chinese learners of English or have included Chinese subjects in their studies. For example, Huang (1978) observed Paul, a Chinese child, as he acquired a second language in Los Angeles. Dulay and Burt (1974) included 55 Chinese children in their study of natural sequence in child second language acquisition. Krashen (1975), in order to find out the importance of the monitor, studied the spontaneous speech of a Chinese woman who had immigrated to U.S. in her late twenties. However, all these studies have been done in countries other than China and most of the subjects were immigrants who had picked up the English language in a host setting. Recently, however, some Chinese scholars have carried out acquisitional studies in the Chinese context. Examples include the studies on the learning of the English tense-aspect system (Huang 1986), the English interrogatives (Chen 1986) and the English negatives (Hou 1986). These are the pioneering efforts in SLA research which focus on the Chinese EFL learners. Though their research emphases are different, some on confirming the universal order of acquisition



by comparing their studies with earlier ones, while others on testing the interlanguage theory, all these studies have presented an acquisitional picture in one particular aspect of the English language. Inspired by their works, the present researcher has carried out this study, which serves a complementary purpose so far as SLA studies in the Chinese context are concerned.

### 1.3. Organization of the Study

This study consists of 6 chapters. The present chapter introduces the problem, the purpose and significance, and the organization of the study. Chapter 2 is composed of three sections, one offering a linguistic overview of the English modal system, another reviewing earlier studies on modal acquisition in L1, and still another elaborating on one of the determining factors for interlanguage development -- the transfer account. Chapter 3 describes the research methodology, i.e. the formulation of the research design, the selection of data type, the subjects, the construction of elicitation instruments, and the data collection and processing procedures. Chapter 4 reports on the results of the investigation. Chapter 5 discusses the results. Finally, in Chapter 6, summaries of the major findings of the investigation are presented. Also included in the last chapter are the limitations and pedagogical implications of the study as well as suggestions for further research.



## Chapter 2

### Literature Review

#### 2.1 Introduction

This chapter is divided into three parts. The first part (2.2) is a linguistic overview of the English modal auxiliary system. Without a general idea of the features of the system, the discussion of the development and use of the modal system will be made difficult since this system is a very complex one. However, there are so many issues related to the modal system that the overview can not be rendered exhaustive. To pinpoint the purpose and the scope of the present study, only the following issues will be dealt with: the syntactic characteristics and the semantics of the English modal auxiliaries, and the interaction of modal auxiliaries with some syntactic patterns such as negation and tense and aspect.

The second part (2.3) reviews earlier L1 acquisition studies on modal auxiliaries in child language development. Such studies are not many in number. Besides these, some relevant studies which concentrate on things other than the English modal system but touch upon it are also reviewed briefly. Acquisition studies on modal auxiliaries in SLA are even more scarce and are not directly related to the present study<sup>(6)</sup>, so no studies will



be reviewed.

The third part (2.4) reviews studies on language transfer -- one of the determining factors in interlanguage development. As we know, interlanguage development is a complex process, in which various interrelated determining factors are involved. For instance, the learner's first language, L2 input, age, motivation, learning strategy, linguistic universals, etc. are all possible candidates. Broadly speaking, these determining factors can be categorized into three general types: 1) linguistic, 2) sociolinguistic, and 3) psychological. From each of these three perspectives, McLaughlin (1987) points out, various hypotheses have been formulated and important theories have been developed, such as the Universal Grammar theory, acculturation/pidginization theory and cognitive theory. Together with the more global and general theories such as the monitor model and interlanguage theory, they account for the process underlying interlanguage development. As can be seen, it is an enormous job, if not an impossible one, to examine all the factors contributing to interlanguage development. For the purpose of the present modal study, however, only one such determining factor in the psychological domain -- language transfer -- will be briefly discussed, together with a review of relevant studies.

## 2.2. Complexity of the English Modal System

### 2.2.1. Syntactic Characteristics of English Modal Auxiliaries



There are at least two approaches to the analysis of a certain grammatical category: syntactic and semantic, since language comprises form and meaning. In theory, "it would be possible to start at either end, either to start with semantics or to start with form" (Palmer 1965). In practice, this dual analysis can actually be found in the treatment of the English modal auxiliaries. That is to say, the scholarly works deal with the English modal auxiliaries either as a consistent category - subject to regular rules or as a group of semantic categories with individual variations of meanings.

Though some linguists (Ross 1969, for example) have expressed their doubts as to whether modal auxiliaries should be put in a category separate from that of the other verbs which take verbal complements, evidence shows that there do exist certain syntactic characteristics which clearly distinguish verbs like WILL, SHALL, CAN, MAY, MUST (and some others) as members of an independent formal system. In proposing the syntactic characteristics of such verbs, opinions among grammarians differ nevertheless. Long (1969) holds that "The verbs most regarded as modals are those which are normally followed by infinitives." This is of course too simplistic a view, because catenatives are also followed by infinitives, but they do not share other syntactic characteristics with modal auxiliaries. Ehrman (1966) describes modal auxiliaries as "that closed class of verbs which may occupy the first position of a verb phrase, which may be



immediately preceded by another verb, which may invert with the subject in interrogation and which are negated directly by NOT." With such a statement, the major syntactic characteristics of English modal auxiliaries are outlined. Leech (1971), Huddleston (1984), and Quirk et al. (1985) have all dealt with the syntactic characteristics of the English modal auxiliaries at some length. The existing analyses have thus established the unique status of English modal auxiliaries as an independent grammatical category.

However, in the existing literature, the most thorough treatment with regard to the syntactic aspect of the English modal system is that of Palmer (1965a, 1965b, 1979), whose analysis has been widely acknowledged and accepted. According to Palmer, there are seven main syntactic criteria for English modal auxiliaries. They include the four "nice properties" (Huddleston 1976) which are applicable to all the primary verbs (i.e. BE, HAVE, DO) as well as the secondary or modal auxiliary verbs, and three other properties which are unique to modal verbs. These seven criteria run as follows:

1. Occurrence with contracted negative form (CAN'T, MUSTN'T);
2. Occurrence with inversion (CAN I? MAY I ?);
3. Occurrence with "code" (?) (He CAN go and SO CAN you.);
4. Occurrence with emphatic affirmation (He 'CAN do it.);
5. Absence of person-number inflection (\*CANs, \*MAYs);
6. Absence of non-finite forms (\*to CAN, \*MAYing);



7. No cooccurrence within the same clause (\*He MAY WILL go),(8)

In his recent work, Palmer (1986) adds another four syntactic features unique to English modal verbs:

1. no imperative forms;
2. existence of formal difference between modal verbs, in their epistemic and deontic senses, in terms of negation and tense;
3. existence of suppletive negative forms for some modals;
4. no morphological past tense for some modal verbs and some past tense forms do not refer to past time.

With the syntactic characteristics clearly stated, it seems easy to yield a finely-set category of modal auxiliaries. However, things are not so simple, since there are blurred and difficult cases. For example, OUGHT TO and HAVE TO are considered as modal auxiliaries by some grammarians but only as marginal ones by others because of their TO-infinitive. MAY fits in most of the criteria but violates the negation criteria which allows the direct attachment of the contracted negative form to the modal auxiliary, as its negative form is not MAYN'T but MAY NOT. Though some grammarians tend to include NEED and DARE in the modal system, others exclude them because they appear only in interrogative and negative sentences.

Table 2.1 shows the disagreement among a few selected grammarians on the issue concerning the membership of the English modal system:



Table 2.1                      Membership of the English Modal System

Ehrman (1966)	Long (1961)	Leech & Svartvik (1975)	Palmer (1979)	Quirk et al. (1985)
will would	will would	will would	will/would	will/would
can could	can could	can could	can/could	can/could
shall should	shall should	shall should	shall/should	shall/should
may might	may might	may might	may/might	may/might
must	must	must	must	must
ought		ought	ought	ought
need	need	need	need	need
dare		dare	dare	
	have to	have to		have (got) to
		used to	used	

As can be seen, no two lists are exactly the same though there is overlap of the specific items. Even with the overlapping cases, the analyses differ: Are WILL and WOULD the same word only with tense distinction or different words that go beyond a mere tense distinction? What about CAN and COULD as a pair? MAY and MIGHT? SHALL and SHOULD? Here, the untidiness and complexity of the English modal system in terms of their membership is self-evident. What linguists can do is to offer a rough category of English modal verbs. However, despite the fact



that different linguists disagree on the total membership, they have unanimously agreed on ten as being the "true" English modal auxiliaries. They are CAN, MAY, MUST, WILL, SHALL, COULD, MIGHT, WOULD, SHOULD and OUGHT TO. It is these ten true models that the present study is mainly concerned with.

### 2.2.2. Semantics of English Modal Auxiliaries

The semantics of English modal auxiliaries is highly intricate. This is perhaps attributable to the fact that as a chief device for the expression of modality (cf.p.3), this closed class of modal verbs have to realize various kinds of human modalities. In order to understand the various meanings of English modal auxiliaries, it might be helpful to take a quick look at the earlier proposals by philosophers for the typology of modality.

Palmer examines, in his recent book (1986) and in a recent lecture series (1987, Hong Kong), some of the earlier views on modality types. He mainly cites the proposals by Jespersen (1924), von Wright (1951), Rescher (1968) and Searl (1983).

Jespersen first offered a two-set classification of mood, with quite a few sub-categories. He divided mood into one containing an element of will and one containing no element of will. These two parts in fact correspond roughly to the widely



used notions of deontic and epistemic meanings (see discussion below).

After Jespersen, the philosopher von Wright distinguishes between four kinds of modality, namely, "alethic", "epistemic", "deontic" and "existential". By alethic modality, he refers to logical necessity or truth, as manifested by the sentence "A is B's father, so B MUST be A's child." His epistemic and deontic modality are by and large analogous to Jespersen's two-set classification which is set up in terms of the element of will. By existential modality, von Wright means the mode of universal or existing possibility, as in "The monsoon CAN be dangerous."

A more extended framework is suggested by Rescher, another philosopher. In addition to "alethic", "epistemic" and "deontic" modality, he proposes "temporal", "boulomaic" "evaluative" and "causal" modality. The first two can be glossed as "It's sometimes/mostly..." and "It's hoped/desired that..." respectively. The latter two can be paraphrased as "It's good/wonderful that..." and "The state of affairs will bring it about that..." respectively; they are not, however, regarded by some grammarians (e.g. Palmer 1986) as obvious "candidates" for modality. It seems that Rescher has made the typology of modalities unnecessarily extended.

Approaching the issue from a different perspective,



Searle (1983) makes use of speech act theory and develops his own framework. He argues that there are five types of modality: assertives, directives, commissives, declaratives and expressives. His assertives and declaratives, similar to each other in nature, both describe modality in terms of the speaker's belief and commitment; therefore, they seem to correspond to epistemic modality. His directives and commissives are isomorphous with deontic modality, and his expressives comply with Rescher's "evaluatives".

While philosophers concern themselves with the semantic notion of modality, linguists are interested in the linguistic expressions for modality. Drawing on the philosophers' views towards various types of modality, English linguists, or rather grammarians, also make distinctions between different types of modal verbs. However, their distinctions and classifications differ somewhat.

Palmer (1965a, 1979) puts forward a tripartite distinction. That is, besides epistemic and deontic modals, a third modal type, the dynamic, is identified. By dynamic modals, he refers to those which are related to the subject's characteristics or qualities. Therefore, in English, CAN in the sense of ability and WILL in the sense of volition are taken by Palmer as dynamic modals since ability is the quality of the subject and volition shows the subject's will.



Leech and Coates (1979), unlike Palmer, distinguish between epistemic and root modals. The former embraces both the epistemic and alethic categories and the latter the deontic and dynamic categories. Hence, Palmer's dynamic CAN is included in the root category in Leech and Coates' system, a system shared by Cook (1978) and some others.

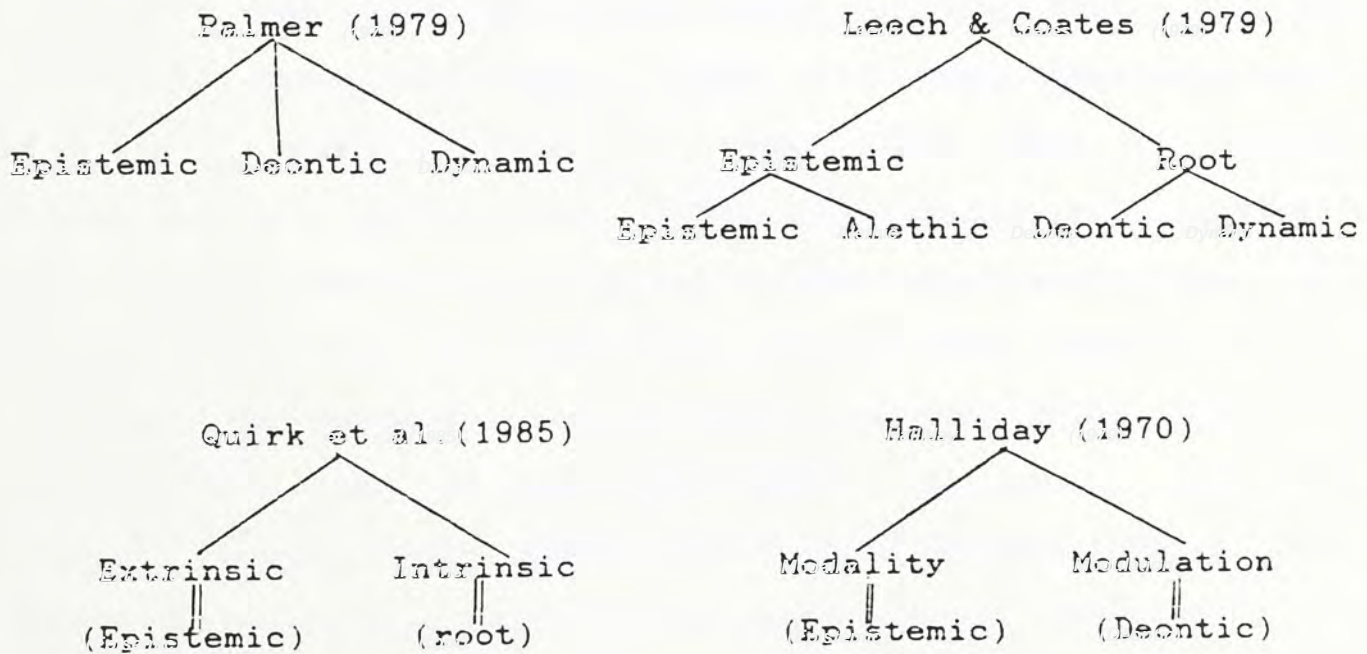
Quirk et al. (1985) use two different notions for the English modal meanings: extrinsic and intrinsic. According to them, extrinsic modals are those which express "possibility", "necessity" and "prediction" that typically concern the truth value of the utterance and human intellect. They are in fact epistemic modals. Intrinsic modals, on the other hand, express such notions as "permission", "obligation" and "volition" which involve intrinsic human control over events. They are tantamount to deontic modals.

Approaching the modal meaning from a functional point of view, Halliday (1970) makes a distinction between 'modality' and 'modulation'. By 'modality', he means "a form of participation by the speaker in the speech event". It represents the speaker's assessment of probability and predictability, in other words, "speaker's comments". Being "Interpersonal" in function since it "relates to the speaker's own communication role", 'modality' roughly corresponds to epistemic meaning. 'Modulation', on the

other hand, has nothing to do with the speaker's assessment of probability. It expresses permission, obligation and the like. "Ideational" in function since it "relates to a particular part of the content of the clause", modulation is similar to deontic meaning.

Different classifications of the English modal verbs by the above-mentioned linguists and grammarians can be summarized as follows.

Figure 2.1 Classifications of the English Modal Verbs



It is clear that whatever the framework, the category of epistemic modals is always there. Where linguists differ is in the other broad category -- non-epistemic modals, which are



either referred to as "root" modals or are further classified into "deontic" or "dynamic" modals as Palmer does. However, the first notion is preferred here, since root modals encompass both deontic and dynamic modals,<sup>(8)</sup> and the resultative dichotomous framework of epistemic and root modals seems more concise.

Here, brief definitions for epistemic and root modals are in order. Epistemic modals are those modals "concerned with belief, knowledge, truth, etc. in relation to proposition" (Palmer 1986, p. 26). In Coates' (1983) words, an epistemic modal is "concerned with the speaker's assumptions or assessment of possibilities, and in most cases, it indicates the speaker's confidence (or lack of confidence) in the truth of the proposition expressed" (Coates 1983, p.18). So, they may occur with state, process or action verbs (Cook 1978). In Coates' framework (cf. p.23), the modals expressing a) confident inference, b) tentative inference, c) epistemic possibility and d) prediction are all epistemic modals. The forms used to express these meanings are a) MUST, b) SHOULD/UGHT TO, c) MAY/MIGHT/COULD and d) SHALL/WILL/WOULD respectively. The root category covers a wider spectrum of meaning (Coates 1983, p. 247) and is therefore more difficult to characterize. Included in it are both deontic modals, which are "concerned with action, by others and by the speaker himself" (Palmer 1986, p.96), and dynamic modals, which are related to the subject's characteristics or qualities. They occur with action verbs only

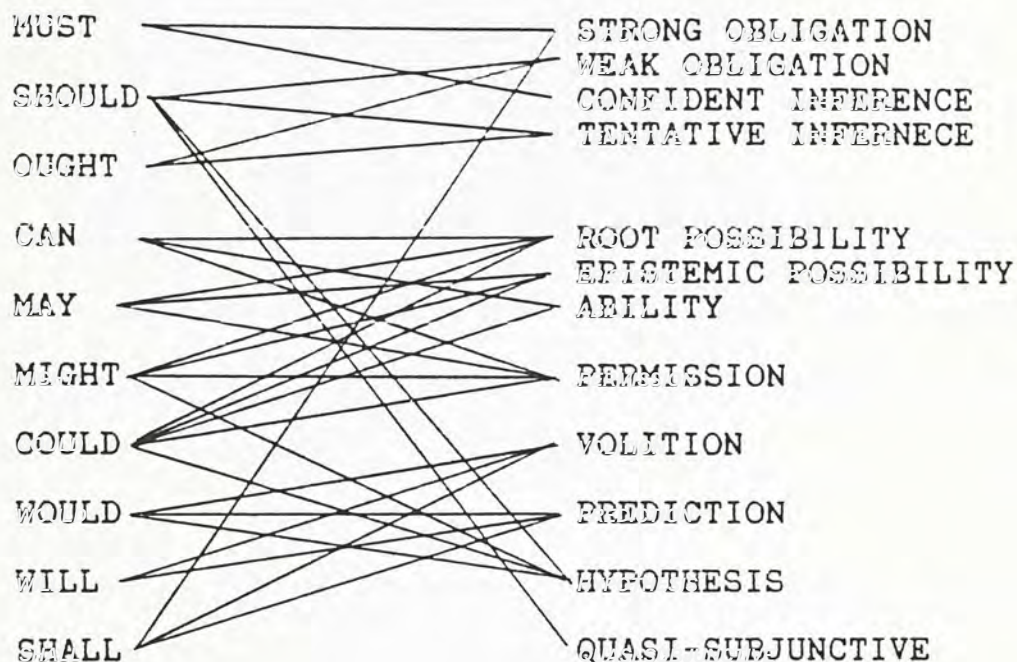


(Cook 1978). Typical root modals are MUST and MAY, expressing deontic obligation and permission. However, they only represent the core. In Coates' framework, the modals expressing a) strong obligation, b) weak obligation, c) root possibility, d) ability, e) permission and f) volition are all root modals. They are represented by a) MUST, B) SHOULD/UGHT TO, c) CAN/MAY/MIGHT/COULD, d) CAN/COULD, e) CAN/MAY/MIGHT/COULD, f) SHALL/WILL/WOULD respectively.

A close look at the English modal verbs enables us to make two important observations. First, each English modal verb has both epistemic and non-epistemic meanings (Quirk et al. 1985). For example, MAY has the epistemic meaning of possibility as well as the deontic meaning of permission; MUST has the epistemic meaning of logical necessity as well as the deontic meaning of obligation. The other important observation is that, some English modal verbs, though not all, have overlapping meanings and can be used interchangeably as free variations. For instance, CAN and MAY in the sense of permission can replace one another, though MAY is often thought to be associated with formal situations. SHOULD and OUGHT TO are normally regarded as having little difference in meaning and one can be used for the other.<sup>(10)</sup> In short, English modal auxiliaries do not have a one-to-one correspondence between form and meaning. Coates' (1983) diagram of the relationship between modal forms and meanings, reproduced below, best explains the situation.



Figure 2.2 Relationship between Modal Forms and Meanings



If we follow the line in the above figure from left to right, we find that English modal auxiliaries are polysemous, and if we follow the line from right to left, English modality is found to be polylexical. However, not all English grammarians adopt the polysemous approach in the analysis of modal meanings. Some adhere to the monosemous approach. They claim to be able to bring all the uses of any one modal auxiliary within the scope of a single broad definition of its meaning. Among the latter group are Joos (1964) and Ehrman (1966), who advocate a "basic" meaning for each modal, and Perkins (1983), who develops a framework for establishing a "core" meaning for individual modals. Each of their monosemous approaches has its own merits; however, each is not entirely successful, since the picture of English modal meanings is more complicated than can be expected. In fact,



24

Ehrmann has already encountered the difficulty in assigning a basic meaning to MAY and SHOULD. Adopting a more objective view, Leech and Coates (1979) conclude that English modal meanings are characterized by "a mixture of monosemy and polysemy, and a mixture of categorical and non-categorical contrasts." In their opinion, while most English modal auxiliaries are polysemous, CAN is essentially monosemous, because there are no clear-cut divisions between permission, possibility and ability which all belong to the root meaning.

All in all, the extensively diverse views concerning English modal meanings seem to suggest that English modal verbs are, to a large extent, subject to semantic anarchy. Nevertheless, Coates' network of modal meanings, though still crude, best captures the relationship between modal meanings and modal forms. Thus, it is workable and can serve as a base for examining language learners' mastery of the English modal meanings and forms.

### 2.2.3. Interactions of English Modal Auxiliaries with Negation

The system of English modal auxiliaries is further complicated by their interactions with negation. The problem with a negative modal construction does not lie in the positioning of the negative, for the negative always follows the modal or is attached to it; rather, it lies in the scope of negation and in the proper choice of negative forms for



expressing the underlying meanings.

It is clear that a structure with a modal auxiliary is a two-verb structure which contains a modal and a main verb. When a negative is added to this structure, the negative may modify the modal or the main verb. If what is negated is the modal itself, the negation is then outside the scope of the modal, hence "external negation" (Cook 1978), "negation of the modal" or de dicto (Miller and Kwilosz 1981), or "auxiliary negation" (Quirk et al. 1985). If what is negated is the propositional component following the main verb, the negation is then inside the scope of the modal, hence "internal negation", "negation of the proposition" or de re, or "main verb negation" (11) as opposed to the parallel terms just mentioned.

To bring out the complication that marks modal negation in English, it might be helpful to take a preliminary glance at modal negation in Chinese, our subjects' native language, and then make a comparison between the two.

In Chinese, modal negation is effected by the mere attachment of the negative particle bu, either before or after the modal expression, be it a modal verb or modal adverb. The different positioning of the particle results in different scopes of negation. If the particle is pre-positioned, forming the bu+M pattern, then external negation is achieved. For instance, bu



keneng<sup>(12)</sup> means "It is not possible that...". If the particle is post-positioned, forming the M+bu pattern, then internal negation results. For example, keneng bu means "It is possible that not..."). In short, in modal negation in the Chinese language, the negative particle has different distributions to obtain different scopes of negation and the relative linear ordering at the surface level serves as a parameter of negation scope. In other word, the scope rule for Chinese modal negation can be stated in purely surface terms.

In fact, such a scope rule characterizes not only modal negation but also other language phenomena of the Chinese language. Huang (1981) has once examined the scope phenomena of Chinese quantifiers. He argues, with the support of a set of convincing examples, that the scope rules for Chinese quantifiers and other operators is fairly straightforward and can be stated in purely surface terms: "within a simple sentence an operator receives a feature marking [+op] for every operator that precedes it in surface structure, and [-op] for every operator that follows it" (Here [+op] means inside the scope of the preceding operator and [-op] outside its following operator) (Huang 1981, pp. 299-230). That is to say, the relative ordering at the surface level determines the scope phenomenon. For example, the surface positioning of the quantifiers interacting with the negative particle in the following two sentences clearly signals the different scopes of the quantifier:



1. a. Wo meiyou jiejie henduo wenti.  
 (I NOT solve MANY problem.)  
 b. I could solve few of the problems.
2. a. (You) henduo wenti wo meiyou jiejie.  
 (There is MANY problem I NOT solve.)  
 b. There were many problems I couldn't solve.

In (1a) the quantifier henduo (many) is inside the scope of negation and in (2a) it is outside the scope of negation. The fact that the scope rule can be stated in purely surface terms shows that the Chinese language is logically transparent (Huang 1981).

In English, however, the relative linear ordering at the surface level can not signal different scopes. In the above example, while the Chinese sentences (1a) and (2a), each with a different scope of the quantifier, carry different meanings, they can be rendered directly into one single English sentence:

I didn't solve many of the problems.

So the surface structure of this English sentence embodies, in fact, two different scopes of the quantifier, one inside the scope of negation and the other outside it. It is therefore clear that English is less transparent than Chinese in terms of the scope phenomenon.

Returning from the scope phenomenon of quantifiers to the scope phenomenon of modal negation in English, we find a similar



type of complication. In an English modal sentence, the negative particle NOT has only one distribution -- it always follows the modal auxiliary. Because of this, the decision on the scope of modal negation in English cannot be made at the surface level. Furthermore, while the scope of modal negation in Chinese can be achieved by the syntactic device, i.e. the surface positioning of the negative particle bu, this is not always true with English.

In fact, there are three different cases concerning the scope of modal negation in English. First, some modal verbs such as WILL/SHALL, when used as markers of volition mingled with the sense of futurity, carry no distinction between internal and external negation. In other words, one does not have to care about whether WILL NOT/SHALL NOT indicate internal or external negation. As Palmer (1979) points out, though the two sentences

He WILL NOT come tomorrow.

He WON'T come tomorrow.

are formally and stylistically different, they do not differ in meaning in terms of what is being negated.

Secondly, some modal verbs such as SHOULD/UGHT TO expressing weak obligation, when negated, can achieve both internal and external negation. They may mean either "It is obligatory for...not..." or "It is not obligatory for...". In such cases, the learner can conveniently use the same negated modal form in production to negate either the modality or the



2

proposition though it is more troublesome in comprehension where the learner has to decide on the scope of negation from a form which may signal both scopes.

Apart from these two cases, there are some other modal verbs, which, when followed by the negative particle, only results in one particular scope of negation. To achieve the other scope, a different form is required. This brings in the problem of proper choice of the negative forms. As Cook (1978) points out, in order to form the contrary of a modal sentence, it is not sufficient simply to add the negative particle; attention should be paid to choosing the correct negative form.

For example, with the modal notion of "epistemic possibility"<sup>(13)</sup>, when the proposition is negated (It is possible that...not...), the negative form MAY NOT is used. To negate the modal (It is not possible that...), CAN'T should be used instead of MAY NOT:

He may not have met her before. (=It is possible that he has not met her before.)

He can't have met her before. (=It is not possible that he has met her before.)

To negate "epistemic necessity",<sup>(14)</sup> interestingly, we use exactly the same two forms :MAY NOT and CAN'T. But one big difference is that the negation of proposition and modal as in the case of epistemic necessity is just reversed. That is to



say, to negate the proposition of epistemic necessity, the form CAN'T which is used for negating the modal of epistemic possibility is picked up. To negate the modal of epistemic necessity, the form MAY NOT which is selected for negating the proposition of epistemic possibility is used. Thus we have

Mary can't be at home. (=It is necessary that Mary is not at home.)

Mary may not like it. (=It is not necessary that she likes it.)

Such an analysis of choice of forms is actually not strange at all, since there in fact exist the logical equivalences of NOT POSSIBLE=NECESSARY NOT and POSSIBLE NOT=NOT NECESSARY. Hence we use CAN'T in the first case and MAY NOT in the second.

With regard to root modals, we have mentioned (cf.p.22) that modals of permission and obligation represent the core. To negate the modal itself in the case of permission expressed by MAY and CAN, the only thing to do is to attach the negative particle NOT to these modals. To negate the proposition, however, there is no regular way, as Palmer (1979) points out. The only possible way is to emphasize the negative NOT (as represented by the stress marker " in the following sentences) to suggest that permission not to act is given:

You <u>may not</u> leave now.	} -- negation of modality	
You <u>can't</u> leave now.		
		(You are not allowed to leave.)



You may "not leave now. } -- negation of proposition  
 You can "not leave now. } (You are allowed not to leave.)

In the case of obligation expressed by MUST, two different forms may be used in its negative situation. To negate the modal itself, hence "external", NEEDN'T is used to lay non-obligation to act. To negate the proposition, hence "internal", the status of MUST is still kept. That means MUSTN'T is used to lay obligation not to act. For example:

Must I tell him about it? --No, you needn't.  
 (You are not obliged to tell...)  
 May I tell him about it? --No, you mustn't.  
 (You are obliged not to tell...)

#### 2.2.4. Interactions of English Modal Auxiliaries with Tense-Aspect

A neat picture of interactions between English modal auxiliaries and tense-aspect is difficult to draw. This results from three factors.

First, not every modal auxiliary takes a past tense form. Only four out of the ten "true modals" (see p.16) have their equivalent past tense forms: MIGHT for MAY, COULD for CAN, SHOULD for SHALL and WOULD for WILL. Morphologically, MUST and OUGHT TO do not have past tense forms. They have to take their suppletive form HAVE TO. COULD also has its suppletive form BE ABLE TO when the actual performance of something in the past is referred to. Strictly speaking, there is no one-to-one correspondence between



the present and past tense forms.

Secondly, while the present forms of the English modal verbs can make propositions relating either to the present or the future, past tense forms have either present or past meanings. In other words, past tense forms do not always have past time meaning. Apart from the use in past discourse contexts, as in

Only men could vote at that time. (past permission)

Tom thought that Bob might be angry. (past possibility)

the past tense forms of English modal auxiliaries may be used in present discourse context to express hypothesis, tentativeness, politeness and putativeness. For example:

If you could put the machine in motion,  
we might hire you as an engineer. (hypothetical)

Mary could be in the reading room now. (tentative)

Could I say a few words? (polite)

She insisted that we should go. (putative)

The third complication in interactions of modal auxiliaries with tense-aspect is that aspect, in all likelihood, has to do with epistemic modals. In other words, modal progressives and perfectives, the former being syntactically formed by M+BE-ING and the latter by M+HAVE-EN, are normally associated with epistemic modals. This is not surprising, though. As is acknowledged, people can make judgments about the present and past occurrences and can also infer or judge what is



actually happening. On the contrary, to give permission or talk about ability, as expressed by root modals, for an ongoing activity seems to "violate normal conversational procedures" (Cook 1978). Hence,

He must be playing the piano.

He may have forgotten to post the letter for me.

are two well-formed sentences, showing the speaker's confident inference about some action which is going on and the speaker's assumption about a past event. They can not but carry epistemic modality.

In the root sense, however, we cannot at the moment of speaking give permission or lay obligation in the past or for an action which is going on. To put it another way, there can be no obligation or permission in the present to perform an action which is already going on or an action which was already done in the past. It is simply illogical. However, the fact that neither in the modality nor in the propositions can there be any indication of past time should not lead us to the misconception that root modals have no relation at all with the past time. In fact, with the deontic SHOULD/UGHT TO and COULD, which may carry deontic obligation and permission respectively, the MODAL+HAVE+EN construction does exist to refer to past time. Such combinations, i.e. should/ought to have and could have, usually imply that the event did not take place. This is what Palmer (1979) terms as "the unreality of the event". For example:



Mary should have told her mother. (But she didn't.)

He ought to have done it. (But he didn't.)

Tom could have attended the meeting. (But he didn't.)

### 2.2.5. Summary

After a brief discussion of the syntactic characteristics and semantic properties of the English modal verbs as well as their interactions with negation and tense-aspect, it is not difficult to see the complexity of the English modal system. One single modal may carry several different meanings; different modals may share similar meanings and can sometimes be used interchangeably. Besides, the same modal may interact with negation and tense-aspect in different manners; different modals may behave in similar manners. All this has made the English modal system "messy" and "untidy" (Palmer 1979). Consequently, the best that linguists can do with English modal auxiliaries is, perhaps, not to work towards a tidy and rigid category but to describe as adequately as possible the meaning and function of different modals in different environments before some possible generalizations can be made. As for researchers on language acquisition, similarly, the best they can do is to describe as fully as possible the language learner's use of modal auxiliaries with different meanings and in different syntactic environments before something can be said about the characteristics of the learner's behaviours in the intriguing area of the English modal system.



## 2.3. Earlier Studies on Acquisition of Modal Auxiliaries in L1

### 2.3.1. Major's Study (1974)

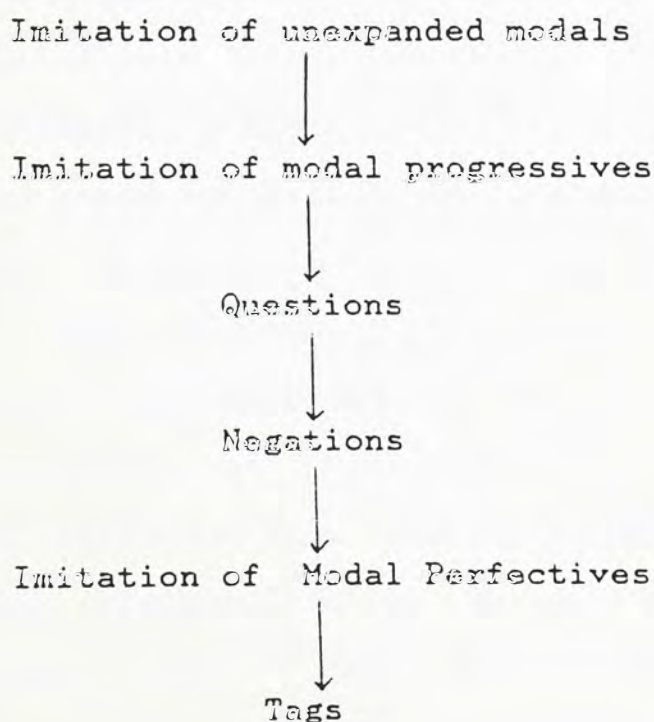
Inspired by the prevailing efforts in 1970s into the search of "internalized grammars" of children at given stages in the language development process, Major picked up the English modal system as an area for such a search. She sampled 44 children from kindergartens and Grades One to Three acquiring English as a first language. Their age range was 5 to 8.

In Major's study, all the children were asked to perform the same two tasks: imitation and transformation. In the imitation task, the children were asked to repeat 50 modal sentences which were built around a paradigm that included the unexpanded modal forms (cf. Note 4), modal progressives and modal perfectives. The criterion for a correct performance was the exactness of repetition. This was based on the belief that children can imitate correctly sentence patterns with grammatical categories only when these categories are in their own internal grammar. In the transformation task, the children were asked to turn the imitation sentences into negative sentences as well as sentences with tag questions. Besides, 13 embedded Yes/No questions and 4 embedded information questions<sup>(15)</sup> were provided for transformation into questions beginning with modal verbs.

The results of Major's study showed that children up to



the age of 8 have not yet fully mastered modal progressives and modal perfectives in the imitation or in the transformation tasks, though the older children coped better. So far as individual modals are concerned, children had a better command of CAN, COULD, WILL, WOULD and SHOULD in most tasks than MAY, MIGHT, SHALL, MUST, NEED, DARE, OUGHT TO and the quasi-modals WOULD RATHER and HAD BETTER. In terms of tasks, depending on the ages of the children, the formal regularity of individual modals and the number of transformations required, the reported order of difficulty from the least to the most difficult runs as follows:



With respect to patterns of deviant sentences, the most frequent deviation discerned among the kindergarteners in imitation task was to omit either the modal or the expanded



auxiliary, usually the latter; the older children omitted only the expansions. In forming tags as well as in other tasks, the youngest children often made more than one error at a time. But as the children grew older, the errors they made changed not only in kind but also in number, i.e. older children made fewer errors at each time.

Major's study was comprehensive and revealing. As Perkins (1983) points out, her study was "perhaps the only extensive analysis of the modals in the language of children even up to date". However, Major's study had certain de-merits. Since it was an item-to-item survey, she had to start from the modal forms and take the syntactic classification as a point of departure. She did not, and could not, take into full account the fact that the context of a modal would affect the way its meaning was interpreted. This fundamental limitation resulted in her "avoidance" of semantic treatment of the modals. Consequently, some of the imitation and transformation problems that the children had may well have been due to the meaning of the modal in a particular context, rather than simply the syntactic complexity of the task. In fact Major herself had to admit (1974, p.102) "A strict adherence to the formal framework found in current transformational texts produces deviant sentences."

### 2.3.2. Wells' Study (1979)

As part of a larger study of language development in



children acquiring English as a first language carried out in the University of Bristol, a research on the learning and use of the English auxiliary verbs was done by Wells. Included in this were certainly modal auxiliaries. Using a strategy different from that of Major, Wells collected regular samples of spontaneously occurring speech among 60 children and extracted from these samples the data of auxiliary verbs. In the study, recordings were made of each child at 3-month intervals during a particular period of time over one day. The first recording was made at the age of 15 months and the last 45 months. During the whole data collection process of this longitudinal study, children wore a radio-microphone, but they were not aware when the recording was being done. Their mothers were asked to recall in the evening the activities relevant to each sample speech so as to provide contextual information.

With the data collected, the frequency of each auxiliary form was summed over all recordings and all children. A calculation was made of the proportion of the sample which had used each form at least once in an utterance. If 50% of the sample in one age group (in 3-month intervals) used a particular form at least once, then that form was regarded as acquired.

Wells' results showed that there was a considerable variation in the frequency of the occurrence of English auxiliaries in children's language. So far as modal auxiliaries



were concerned, the majority of them did not "reach the criterion of mastery by more than 50 per cent of the children." Despite those variations, however, a tentative order of acquisition of the ten "true modals"(cf.p.16) based on total frequency was suggested :

Table 2.2 Extracted Data on L1 Modal Acquisition (Wells 1979)

Modals	Total Frequency	Proportion of Sample using	Age in Months at Criterion
CAN	1210	98	30
WILL	841	100	30
SHALL	123	60	39
COULD	66	50	42
MUST	52	45	
MIGHT	32	32	
SHOULD	26	25	
WOULD	25	22	
MAY	25	17	
OUGHT	2	3	

(Based on Wells, with other modal-like constructions suppressed)

Besides the acquisition order of auxiliary forms, Wells also worked out an acquisition order of meanings used with these forms (cf. Wells 1979). He found that "there are very substantial differences in frequency and extent of mastery of the different meanings". This was as true for different meanings associated with the same form as it was for meanings uniquely expressed by particular forms. The discrepancy was particularly obvious with the modal auxiliaries since the English modal auxiliary system is characterized by polysemous and polylexical features. Further, Wells found CAN in the ability sense was used by over 50% of the children at the age of 30-months old, but CAN



in the permission sense, at the age of 33-months old, and CAN in the possibility sense (Wells assigned it to the Constraint type of modality), well after 36-months old. Definitely, the appearance of one modal form did not necessarily mean that the children had mastered that form with all its meanings. They most likely only knew the partial use of it. Only with the passage of time and accumulation of language experience would they gradually complete the picture of the various uses of particular modal verbs. As Perkins (1983,p.130) concluded after reviewing Wells' study, "The modals in the language of young children are restricted in their usage and the same form is used to express a wider range of meanings as the child grows older."

One good point about Wells' study was that the data he worked with were authentic and contextually rich. Besides, Wells took the semantics of English modal auxiliaries into consideration. Though he did not consciously examine children's ability in manipulating various meanings of a single modal verb, he did observe that there was a discrepancy between frequency of modal use and the extent of mastery of different meanings.

However, as with other naturalistic studies, Wells' study had attendant weak points. Apart from the fact that such a study was extremely labour-intensive, one serious disadvantage was the lack of control over what the language learner produced. Wells had to depend on the chance occurrence of whatever contexts



elicited the modal usage. So, with the data, Wells could not be very sure whether it might be the case that children had actually acquired a particular modal form but did not provide any evidence, until quite late.

### 2.3.3. Perkins' study (1981)

From quite a different perspective, Perkins (1981) carried out a fairly detailed study with a large corpus of spontaneous conversation among 96 children from 6 to 12 years old, which aimed to trace the developmental process of modal expressions in L1 acquisition and to examine the relationship between the use of modal expressions and the sex factor as well as socio-economic background. Different from Major, Perkins included in his study not only modal auxiliaries but also other modal expressions such as adverbial, adjectival, participial and nominal modal expressions.

Perkins believes that "modal forms vary with regard to the degree and sophistication of knowledge of the natural, rational and social laws which they presuppose" (Perkins 1983, p. 126) and therefore, it is possible that there may be some correlations between the cognitive capacity of an individual and the linguistic means at his disposal for expressing modality. It follows then that a child, whose knowledge is highly restricted, may have a very limited number of modal forms to express modality. Besides, because of the complexity of the modal



system, as is illustrated earlier in this chapter (cf 2.2), one can predict that the mastery of a fully developed system will not be achieved until relatively late in the child's developmental schedule.

Using data consisting of stereophonic tape-recordings and transcriptions of spontaneous conversations from the members of 32 groups of 3 children of the same age, sex and social background, Perkins worked out the frequency of usage of each modal expression. The following table shows the frequency order of the ten "true modals" (cf. p. 16) :

Table 2.3. Extracted Data on L1 Modal Acquisition (Perkins 1983)

Modals	Total number of Occurrence	Percentage of Overall Total
CAN	473	25.9
WILL	420	23.0
COULD	95	5.2
WOULD	80	4.4
SHALL	54	3.0
SHOULD	47	2.6
MIGHT	25	1.4
MUST	21	1.2
MAY	5	0.3
OUGHT	2	0.1

(Based on Perkins, with other modal-like constructions suppressed)

Interestingly, Perkins' findings bore a striking resemblance to those of Wells for the spontaneous speech of younger children. Perkins argued, as Wells did, that the distribution of modal expressions in the children's speech was very much influenced by the speech addressed by adults to the



children. "It is just those forms that figure most frequently in the adults' speech that are acquired first and used most frequently by the children."

Perkins also examined the relationship between frequency of use of modal expressions and the sex, socio-economic background and age of the users. His findings suggest that sex has little effect, but age and social background do seem to have a significant effect. The more favourable social background a child has and the older a child is, the more frequently he uses modal expressions. But this applies only to children up to 10 years old. Things are different when children are over 10. Perkins discovers that within the 12-year-old sample it is children from the highest socio-economic group that use modal expressions the least frequently. However, the cause for this is still unknown. Nevertheless, with a different perspective on the acquisition of English modals in children, Perkins has offered us some interesting findings which have supplemented those studies earlier than his.

Fruitful as Perkins' study was, there were two inherent limitations. First, the situation in which the data were collected was not representative of the "entire spectrum of human interaction" (Perkins 1983, p.143). The context was limited and informal since the data were obtained when all the children were engaged in one common task -- building some construction out of



Lego bricks. Though children would touch upon various topics, they were inevitably linked to their common task. Other aspects of human interaction were hardly covered. Because of this, modal usage in the children was very much restricted. The other limitation of his study was that, according to Perkins himself, some children tended to be more talkative than others and the less active or talkative were less well represented in the data.

#### 2.3.4. Other relevant studies

Besides the afore-mentioned studies, there have been some other studies which marginally touched upon the acquisition and development of English modal auxiliaries though their main concentration was on verb phrases, negative constructions, etc. When put together, these studies supplement our knowledge of the modal usage in the language of children.

In their respective studies, Klima and Bellugi (1966), Brown et al. (1969), Bloom (1970), Slobin (1971), Fletcher (1979) and Smith and Wilson (1979) all documented the appearance of modal auxiliaries in English children's spontaneous speech. They found that CAN and WILL were the first modal auxiliaries used by children at about the age of 2;0 (cf. Table 2.2 and Table 2.3). But, these two modals first appeared only in their negative forms CAN'T and WON'T. The reason behind it was perhaps that children had learnt them as unanalyzed wholes, not as combinations of a modal auxiliary and a negative particle. Only months later did



children begin to be aware of the distinct lexical items CAN and WILL, and occasionally SHALL. From then on, they started to use them productively. Though children used a very limited number of modal auxiliaries at that time, the evidence Kuczaj and Maratsos (1975) gave showed that they already knew a good deal about modal auxiliaries. In other words, children's comprehension of modal verbs preceded their production. Kuczaj and Maratsos attributed this to the preanalysis process of children: they would not use an item productively unless he felt that he had mastered it.

Another finding offered to us by these researchers was that children at an earlier stage used modal auxiliaries only in a very restricted way. As we know from the linguistic overview presented earlier in this chapter, one English modal auxiliary may express more than one modal meaning. However, children at an earlier stage could not use the same modal auxiliary to express various meanings. For example, in the case of CAN and WILL, Fletcher's (1979) single subject used them to express ability/inability and willingness/unwillingness or to allow/disallow an action by his addressee. This shows that modals first used by young children were invariably action-oriented. Only with the passage of time did children learn to use the same modal form to express a wider range of meanings.

#### 2.3.5. Summary



Though there have been a large bulk of studies examining the general developmental sequence in L1 acquisition, not many studies have concentrated exclusively on the English modal auxiliary system. Nevertheless, the few focal ones on modal acquisition as well as the marginal ones put together can still give us some ideas of how children acquire this complex linguistic category.

## 2.4. Transfer as a Determining Factor for Interlanguage Development

### 2.4.1. Contrastive Analysis Hypothesis

The term "transfer" has long been restricted to interlingual transfer. It has been commonly believed that interlanguage development is strongly influenced by the learner's first language. Regarded as a "natural and inevitable" phenomenon in SLA, interlingual transfer has caught the attention of linguists and researchers, who have regularly scrutinized and modified this notion.

In as early as 1957, Lado advanced his hypothesis that the learner would automatically "transfer" the habits of his native language structure to the foreign language. In his view, difficulty or ease in SLA was determined by the difference and similarity between the learner's first language and the target language. He made the following claim:

Those structures that are similar will be easy to



learn because they will be transferred and may function satisfactorily in a foreign language. Those structures that are different will be difficult because when transferred they will not function satisfactorily in the foreign language and will therefore have to be changed.

(Lado 1957, p. 59)

Furthermore, Lado also held that difficulty in learning would cause errors, because the learner would, in the face of difficulty, fall back on his L1 habits to produce erroneous structures in second language production. So, a natural cause-effect relationship was established by Lado between linguistic difference and learning difficulty and then between learning difficulty and occurrence of errors. His argument led people into the conviction that

The prime cause, or even the sole cause, of difficulty and error in foreign language learning is interference coming from the learner's native language;

that the difficulties are chiefly, or wholly, due to the difference between the two languages;

that the greater these differences are, the more acute the learning difficulties will be...

(Lee 1968)

So, the learner's first language was thought to be the "villain" in second language learning, the major cause of a learner's problems with the new language.

Lado's ideas about language transfer bred the influential yet controversial Contrastive Analysis Hypothesis (hereinafter



referred to as CAH) which was prevalent in the 1980s. Many researchers engaged themselves in further examining the relationship between linguistic difference and learning difficulty. Among the enthusiastic researchers were Stockwell, Bowen and Martin (1965) and Prator (1967). They developed Lado's ideas and proposed that linguistic differences could be arranged in a hierarchy of difficulty.

Stockwell and Bowen (1965), when making a contrastive analysis of English and Spanish sound systems, first of all classified three types of transfer -- negative, positive and zero transfer. In defining the three terms, they say

A student may have some habitual responses which are contrary to the responses required for a new skill which he is trying to master (negative) or which are similar to the new responses (positive) or which have no relation to them (zero).

(Stockwell & Bowen 1965, p.20)

Based on these three types of transfer and the notions of optional and obligatory choices of certain phonemes in English and Spanish, they proposed 8 possible degrees of difficulty, which were arranged in a hierarchy. Apart from that, they (Stockwell, Bowen and Martin 1965) also constructed, in a similar manner, a hierarchy of difficulty for grammatical structures of English and Spanish, which included as many as 16 levels of difficulty. To capture the essence of the linguistic comparison between the two languages, Prator (1967) collapsed these 16



levels into six categories of difficulty, as is shown below:

- |                         |  |
|-------------------------|--|
| 1) Transfer             | (There is no difference between a feature in L1 and L2);                     |
| 2) Coalescence          | (Two items in L1 become converged into one in L2);                           |
| 3) Underdifferentiation | (An item in L1 is absent in L2);   |
| 4) Reinterpretation     | (An item in L1 has a different distribution from the equivalent item in L2); |
| 5) Overdifferentiation  | (There exists no similarity between L1 and L2);                              |
| 6) Split                | (One item in L1 becomes two items in L2).                                    |

According to Prator, 1) to 6) above are ordered from the least to the most difficult. The first degree of difficulty, representing complete one-to-one correspondence between L1 and L2 rules, is clearly positive transfer. In this situation, the L2 learner only needs to transfer his L1 rules to L2 rule and no errors will ever be committed. The sixth degree of difficulty is the height of negative transfer -- interference. In this case, the learner is often not aware of the fact that one L1 rule is diverged into two rules in L2 which have different distributions. If he still transfers his L1 rule to L2 without discrimination, then errors inevitably occur.

It is clear that the advancement of such a hierarchy of difficulty aims at predicting and explaining "the patterns that



will cause difficulty in learning and those that will not". However, the predictive and even explanatory power of the CAH met with serious challenges when researchers began to show that many errors produced by L1 learners could not be traced to the learner's first language. One such challenge was initiated by Dulay and Burt (1973, 1974).

#### 2.4.2. Loss and Resurgence of Interest in Language Transfer

In the early 1970, Dulay and Burt (1973, 1974) set out to examine whether language transfer from the learner's first language to the target language could account for L2 errors. They found that only a small number of the errors, about 4%-12% for children and 8%-23% for adults, were traceable to the characteristics in the first language. Most other errors were developmental or unique ones. Similar findings were reported in some other studies as well (For example, Tran-Chi-Chau 1974, Mukattash 1977).

The impact of Dulay and Burt's studies was enormous. It seemed that similarity did not necessarily lead to ease and differences need not lead to difficulty in learning, and that language transfer was not the major cause of the learner's errors. Since it could not account for most of the errors, the CAH was considered not much of value and therefore gradually lost its momentum. The role of L1 influence was thus downplayed and the notion of language transfer dismissed as one of the major



factors contributing to second language learning and acquisition.

Then, a turning point came when Schachter (1974) reported her findings after her study on relative clauses produced by adult L2 learners with different language backgrounds. She found that Chinese and Japanese students committed fewer errors though their first languages differ from English with regard to relative constructions. Seemingly, this contradicted the CAH. Nevertheless, Schachter discovered that these students made fewer errors not because their first languages did not interfere with their L2 production but because they made fewer attempts. Their avoidance of using the relative clause was just due to the difference between L1 and L2. So, Schachter's insights about avoidance excited many researchers and pushed interlingual research into new and promising areas. Since then, there has been a resurgence of interest in the phenomenon of language transfer. Many important studies have been published in the hope of exploring the issue of language transfer from different perspectives.

For instance, Schachter and Rutherford (1979) look into the relationship between language transfer and typological organization of discourse. They claim that transfer does not occur only in phonology, syntax and lexis, but also at a higher discoursal level. What is transferred from one language to another can be discourse organization. Gass (1980, 1984)



examines the Accessibility Hierarchy in her relative clause study in order to pinpoint the relationship between language transfer and universals of language. She has found that while transfer does play a role in language development, language universal plays a dominant role. All these studies have pointed to the fact that language transfer combined or interrelated with other factors does play a role in interlanguage development.

#### 2.4.3. Transfer from a Markedness Perspective

In recent years, transfer has been examined from an increasing number of perspectives. One very noticeable trend is to examine language transfer from a 'markedness' point of view. Before the markedness notion is discussed in connection with language transfer, it is useful, perhaps, to discuss the markedness notion in a more global manner.

The notion of "markedness" is not a unified concept. It has multiple meanings and is used to "account for some very different sets of facts" (Solan 1986). To explicate markedness, there are various criteria. The most often used criterion is the core/periphery consideration in Chomsky's framework of Universal Grammar. According to McLaughlin (1987), core rules refer to those parts of the language "that have 'grown' in the child through the interaction of the Universal Grammar with the relevant language environment". Peripheral elements refer to those "that are derived from the history of the language, that



have been borrowed from other languages, or that have arisen accidentally". Core rules are general and common, according with the universals of language, thus unmarked. Peripheral rules are specific and uncommon, being exceptional in some ways, hence marked.

The next often used criterion for establishing the marked status is the complexity notion in a psycholinguistic sense. A structure or a form that requires more cognitive effort and more processing time is thought to be more complex and therefore more marked than one that requires less cognitive effort and less processing time. Such a complexity hypothesis can be traced back to Clark (1973). In an experiment on the acquisition of spatial and temporal deixis in English first language acquisition, Clark discovered that such prepositions as at/on/in in English, which bear a semantic feature of "location", are acquired before the corresponding to/onto/into, which contain an additional semantic feature "direction". This led him into formulating his "complexity hypothesis", which claims that

Given two terms A and B, where B requires all the rules of application of A plus one more in addition, A will normally be acquired before B.

(Clark 1973, pp.54-55)

In other words, the addition of features results in an increase in complexity or markedness, which leads to greater difficulty and later acquisition.



Centering around the markedness notion, empirical studies have been done to examine various problems in SLA. Such studies mainly go along two lines: (i) markedness effect on sequence of development and (ii) markedness interacted with language transfer.

Both semantic and syntactic studies have been done to examine the markedness effect on sequence of development. As Ellis (1985) observes, one well-known semantic study was conducted by Kellerman (1979). He examined second language learners' judgment about the acceptability of such sentences as

(1) I broke the glass.

(2) The bookcase broke by falling.

He found that learners of English from different language backgrounds tended to judge the former sentence which exemplifies the more general and basic use of the lexical item "break" to be more acceptable than the latter which contains a peripheral meaning.

A similar study carried out by Gass and Ard (1984) yielded similar results. In their study, they asked the subjects, a group of EFL learners, to make judgment about which of the following pair of sentences containing the progressive aspect to be more acceptable:



- (1) I'm driving a car now.
- (2) I'm flying to New York tomorrow.

Since the basic or core function of the progressive aspect is to indicate an on-going activity, the former sentence containing the adverb "now" should be regarded as unmarked or less marked. The latter sentence, indicating a future event instead of a present one, carries a peripheral meaning of the progressive aspect and therefore is regarded as marked or more marked. The result showed that learners were inclined to treat the former sentence as more acceptable. This demonstrates the markedness effect in SLA.

Mazurkewich (1984a) once examined second language learners' judgment about the status of acceptability of sentences with (1) dative prepositional phrase complement and (2) double noun phrase construction such as

- (1) Give the book to Mary.
- (2) Give Mary the book.

Her study showed that learners were more ready to accept as correct the former type of sentences, which are regarded as less marked on the basis of a criterion of productivity. Similarly, in another study of hers, Mazurkewich (1984b) found that passivized direct objects (e.g. A football was thrown to Phillip), which are typologically more frequent, thus less marked, were learnt before the passivized indirect object (e.g.



Phillip was thrown a football). These findings have indicated the markedness effect on sequence of development.

Markedness framework has also been used in connection with language transfer in SLA. Unsatisfied with CAH, which lacks predictive and even explanatory power, linguists and SLA researchers have proposed that markedness notion be incorporated into the CAH. Eckman (1977) puts forth the "markedness differential hypothesis", a method for determining directionality of learning difficulty via the principle of universal grammar. According to his hypothesis, if an area in the target language is both different from the first language and relatively more marked, that area will be more difficult for the second language learner. By "marked" is meant, according to Eckman, those structures which imply the presence of other related structures. And language transfer normally occurs where L1 is unmarked and L2 is marked. For instance, in English, the presence of the passive voice with an agent (e.g. He was beaten by his mother) implies the presence of the passive voice without an agent (e.g. He was beaten). In Arabic, however, such an implication does not exist. Thus, English may be thought more marked, with regard to passives, than Arabic. And it follows that L1 transfer in the learning of the passive construction is more likely to occur in Arabic learners of English than in English learners of Arabic.

Also working in the markedness framework to examine



language transfer is Kellerman (1979, 1983). He argues that language transfer is a cognitive process. Such a process is guided by two major factors: (i) the learner's perception of the distance between L1 and L2; and (ii) the degree of markedness of an L1 structure. If two languages, L1 and L2, are very different, then the learner will find little available in the way of correspondence; perception of L1 and L2 distance will thus be great, leading to a lesser possibility of transfer. "The greater the distance, perceptually, between native language and target language, the lower the incidence of interference" (Kellerman 1979). In terms of markedness, Kellerman observes that there are parts of L1 which are irregular, infrequent or semantically opaque. Since they are highly specific and marked, they are not likely to be transferred. For instance, idioms in a language, which are language specific, are less transferable, whereas the more "neutral" and common elements of L1 are more transferable.

In contrast to Kellerman who takes L1 as the point of departure in discussing transfer in the markedness framework, Zobl (1983, 1984) argues that language transfer is very much determined by the structural properties or features of the L2. In his opinion, one major cause for interlingual transfer is the obscurity of L2. Such obscurity may lie in two facts (cf. McLaughlin 1987). The first fact is that L2 is typologically inconsistent and violates linguistic universals. The second fact is that L2 rules are typologically variable and unstable. These



two conditions make L2 marked. In such a case, L2 learners will naturally resort to their L1 and interlingual transfer thus arises. In short, Zobl attributes language transfer to the marked structures of L2.

Obviously, markedness consideration provides a basis for solving some of the problems of the CAH. In particular, it helps to explain why some interlingual differences lead to learning difficulty while other differences do not. All Eckman's, Kellerman's and Zobl's account of learning difficulty which combine the markedness consideration with language transfer can lead to predictions as to when the influence of L1 is the greatest. Their studies have made it apparent that it is not justifiable to deny language transfer any role in interlanguage development.

2.4.4. Extension of Language Transfer

The notion of language transfer has now been extended. Many researchers are no longer restricting its use to interlingual transfer only. Instead, they also use the term to cover intralingual transfer. This is certainly a departure from traditional notions of language transfer.

According to Schachter (1983), language transfer is not a process, but rather a constraint on the acquisition process. A learner's prior knowledge constrains the hypotheses that he makes



about the second language. It is argued that the learner's prior knowledge includes not only the L1 knowledge but also the L2 knowledge (be it accurate/complete or not) which has already been obtained in his target language learning. For further learning, the learner will employ both the L1 and L2 prior knowledge. Hence, both interlingual and intralingual transfer will occur.

In Brown's words (1980), intralingual transfer is

the negative transfer of items with the target language, or put another way, the incorrect generalization of rules within the target language.

(Brown 1980, p. 173)

Such a type of transfer is also termed "overgeneralization" (Tarone et al. 1977, Brown 1980) -- the application of a rule of the target language to inappropriate target language forms or contexts. In other words, the learner just generalizes a rule in L2 which he has learnt and uses it wrongly in place of the correct target language rule. Utterances like "Do they can swim?", "John can swims", etc. are often thought as errors caused by intralingual transfer. In the former case, the learner has learnt the rule that the DO-support is needed at the beginning of an interrogative sentence. But he generalizes this L2 rule to a sentence containing a modal in which, in fact, what effects a question should be the inversion of the modal auxiliary and the subject, not the supply of the DO-support at the beginning. In the latter case, the learner has learnt that the



suffix -s should be attached to the lexical verb if the subject of the sentence is a third-person singular. But he generalizes the use of -s in any sentences with a third-person singular subject without regarding the fact that the main verb following a modal auxiliary should not be inflected.

In his study with a group of native Spanish-speaking students of English as a second language at the elementary and intermediate levels, Taylor (1975) has found cases of both interlingual and intralingual transfer. He claims that at early stages, language learning is characterized by a predominance of interlingual transfer. Once the learner has begun to acquire parts of the new system, more and more intralingual transfer -- overgeneralization within the target language -- is manifested. According to Taylor, interlingual and intralingual transfer, though they appear to be distinctly different linguistic manifestations, both belong to one psychological process, that is, reliance on prior linguistic knowledge -- in the first case the native language and in the second, the target language -- to facilitate new learning.

### 2.3. Summary

To sum up, we can see that language transfer, both interlingual and intralingual, does play a role in SLA. When interacting with the markedness factor, language transfer may help to account for the learning ease or difficulty, sequence of



development and the learner's errors. Therefore, as in other grammatical categories or structures of English, transfer and markedness are expected to play a part in the interlanguage development of the English modal auxiliaries in Chinese EFL learners.



## Chapter 3

### Methodology

#### 3.1. Selection of the Research Design and Type of Data

The present study aims to investigate empirically the development and use of the English modal auxiliaries in Chinese secondary students in a formal learning setting. According to Dulay et al. (1982, p. 245), one of the first steps in a language development study is the selection of one's basic research design, either longitudinal or cross-sectional. They point out (1982, p. 246) that a cross-sectional design is one in which language data are gathered from a relatively large sample of learners at one point in their language development. This kind of design simulates actual development over time by including many learners at different stages of language development. It is believed that a group of learners having the same mother tongue and having had the same experience of learning a foreign language will speak more or less the same interlanguage at any point in their learning career. Also termed "pseudo-longitudinal" by some linguists (Adams 1978, for example), such studies enable one to work simultaneously with groups of learners with different language experience, each representing a certain level of development. Obviously, a design of this kind reduces the time necessary for data collection from learners of different levels



over an extended period of time, hence suitable for the present study, which would cover, within a limited period of time, the whole of 6 secondary levels.

It is sometimes thought that the composite picture yielded in a cross-sectional or pseudo-longitudinal design may not reflect with complete accuracy the developmental patterns at different levels. This may be true. However, with a large group of subjects, the inaccuracy which may be caused by idiosyncratic responses of individuals will be ironed out. Just as Dulay et al. (1982, p. 246) assert, if the sample is adequate or if appropriate analytical requirements are met, the language data collected may still reflect the characteristics of the developing systems over a period of time. Fathman (1978) also suggests, in a study which examines the validity of cross-sectional morpheme order studies, that morpheme rank ordering using cross-sectional data and based on instrument-elicited speech can be a valid method of analysis. All this lends support to the choice of a cross-sectional research design.

With regard to the type of data to be collected, Zydatiņ (1974) points out, "In order to discover the true picture of the language available to them (i.e. FL learners), they must be forced, as it were, to produce these items." In other words, to collect optimal data to reflect EFL learners' proficiency in specific grammatical category, it is necessary to exercise some



control over the learners' linguistic production. There are at least two reasons behind it. The first reason is that learners, especially those in a formal instructional setting, do not in fact spontaneously produce much data for the investigator to work on. This is certainly true in China where the classroom is practically the only place in which secondary school students are exposed to the English language and are motivated to use the language to a certain extent. It can also be argued that even if some data are obtained, it is often limited by the context. So, if a particular structure does not appear in the data, we do not know for sure whether the learner has this structure or not. This is something Wells has found in his study (cf. p. 40).

The other reason for the necessity of exercising control over EFL learners' linguistic production is related to individual learners' personality. As we know, some learners are more "reflective" (Brown 1973) and reserved in their language production; others may resort to "avoidance" strategy to produce only what they are sure of when attempting to speak the target language; still others may have a try anyway and make more errors. This points to the fact that if no control is exercised over the subjects' linguistic production, it will be difficult to get optimal data to reflect and compare the proficiency of learners at various levels. And this will in turn make it difficult to draw general conclusions about the development of EFL learners' language.



Therefore, to find out something specific about the learners' language, "Constraints must be placed on the learner so that he is forced to make choices within a severely restricted area of his phonological, lexical, or syntactic competence" (Corder 1981, p. 61). These constraints, according to Corder, can be applied in two ways: "either by limiting the range of possible choices as in a closed item recognition test or by restricting contextually the range of possible free choices as in an open-ended production test" (Corder 1981, p. 61). Zydatiņ (1974, p. 285) further points out that "The use of translations and multiple-choice items allows one to test specific structures. The analyst can obtain much more data with regard to particular learning points he wishes to investigate." Drawing on what Corder and Zydatiņ have said, two elicitation tasks were devised: translation task and multiple choice task, the former being an open-ended production test and the latter a discrete-point comprehension test. The construction of these two elicitation tasks will be discussed in detail in 3.3.

### 3.2. Subjects

To meet the purpose of the present study, 360 secondary school students learning English as a foreign language were drawn as a sample from 3 secondary schools in Shanghai, China. These three schools had similar backgrounds -- all were situated in the urban Hongkew District in Shanghai; all had a similar system of



administration; all used the same set of textbooks throughout the entire secondary school education; and all were non-key secondary schools, i.e. average schools representing the majority of secondary students in Shanghai.

The data collection sessions were held in June 1988. 120 students were sampled from each of the 3 schools. They were distributed in the entire 6 grades across the whole of secondary levels with 20 in each grade. They were randomly picked out from the class rosters at 10-th intervals. But when the name list was decided on, it was found out that some students had been in fact absent from school because of their contraction of hepatitis during the epidemic at the beginning of 1988. So, the list was adjusted by adding some other students, again at 10-th intervals. As the sex variable was not relevant to the study, the issue of sex difference was not taken care of. These students ranged from age 12 to 18. The sample characteristics are as follows:

Figure 3.1 Description of the Subjects

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Total number:	360					
Number of schools:	3					
Secondary levels:	1	2	3	4	5	6
Number of subjects:	60	60	60	60	60	60
Age ranges:	12-13	13-14	14-15	15-16	16-17	17-18

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A quick note about the teaching situation at the secondary level in Shanghai, China, is perhaps in order here. As English is deemed highly important in a developing country like China for the purpose of modernization, the teaching of English as a foreign language begins at primary schools in Shanghai. But in the 3-period-per-week teaching at primary schools, pupils are taught only vocabulary of daily use, set phrases and some simple, basic patterns. In secondary education, English has become a major and compulsory course, with 5 class periods for secondary 1 to 5 and 4 class periods for secondary 6 every week. Each class period lasts for 45 minutes. Except for the reading of new words, phrases and the text proper, the English class is almost conducted in Chinese. So far as modal verbs are concerned, CAN and MAY first appear in the 4th volume of the nationally-unified primary school English textbook. But they are not formally taught until in the first term of Secondary 2. The first modal auxiliaries to be taught formally are CAN in the ability sense, MAY in the permission sense and MUST in the obligation sense. In the second term of Secondary 2, WILL and SHALL in the volition and prediction senses are taught. After that, COULD, WOULD, SHOULD, OUGHT and MIGHT are successively taught. With regard to aspect, progressive and perfective aspects are taught in the second term of Secondary 1 and second term of Secondary 2 respectively.

### 3.3. Construction of Elicitation Instruments



### 3.3.1. Translation Task

As we have discussed in the linguistic overview of modal auxiliaries in Chapter 2 (cf. pp. 22-23) one modal verb can express two or more meanings and one meaning can be expressed by more than one modal. So, very often, one blank can be filled in with more than one modal verb. For instance, in some places, "MAY" can very well replace "CAN" when it means permission. And also, SHOULD and OUGHT TO are generally used interchangeably. If the blank is open to more than one modal verb, then the scoring of the data in the research will be made difficult. To elicit the use of the only one modal verb which fits the blank exclusively, it is, therefore, necessary to provide an extremely specific context. Without doubt, this is no easy job. And even if pains have been taken to work out very specific contexts, there may still be blanks where two choices are possible. So, it appears that a blank-filling task is not quite suitable for the present study.(18)

In as early as 1972, Corder suggested an elicitation procedure that required direct translation from the native language to the target language. The direct translation method, according to Taylor (1975), was "the most efficient way to elicit specific structures from subjects" since it had the advantages of

- 1) forcing the experimental subject to attempt to form a desired target language structure and
- 2) assuring that the subject understands the semantics of the structure which he is required



to produce.

(Taylor 1975, p.76)

It was with the translation task that Taylor himself successfully obtained data from Spanish learners of English for the analysis of EFL learners' learning strategy. Some other L2 studies (Ravem 1968, Butterworth and Hatch 1978, Varadi 1983, Hung 1986) have also reported the successful use of the translation test to elicit interlanguage data. In all these studies, the researchers started from L1 to elicit the use of L2, used L1 as the reference point of departure to judge L2 performance, and imposed constraints on the subjects, restricting the range of possible choices. Eventually, they all got optimal data for their respective purposes.

The rationale behind the translation test and the existing successful examples encouraged the present researcher to use translation from Chinese to English to elicit data for the investigation of the development and use of English modal auxiliaries. It was believed that modal notions were universal, so when the subjects were given the modal notions in their mother tongue Chinese, they surely would not miss the semantics of the test sentences and thus their production rate could be guaranteed.

In fact, it can be found that English modal verbs have their equivalent expressions in Chinese, either in the form of



modal verbs or modal adverbs (See below). If we use Coates' semantic framework of the 12 modal meanings (cf. p. 23), we can have one-to-one correspondence between Chinese and English expressions, except for (1) the quasi-subjunctive meaning, which is semantically empty (Coates 1983), thus excluded from the present study, and (2) the hypothetical meaning, which does not have an equivalent Chinese lexical item, but is implied in conditional clauses.<sup>(17)</sup> The following list shows such a correspondence:

Table 3.1 Correspondence between English and Chinese Modal Expressions

Modal Notion	English	Chinese
Strong Obligation	MUST	<u>bixu, bidei, dei</u>
Weak Obligation	SHOULD OUGHT TO	<u>yinggai, yingdang gai</u>
Confident Inference	MUST	<u>kending, yiding</u>
Tentative Inference	SHOULD OUGHT TO	<u>yinggai, yingdang</u>
Root Possibility	CAN, COULD MAY, MIGHT	<u>keneng</u>
Epistemic Possibility	COULD, MAY, MIGHT	<u>keneng</u>
Ability	CAN, COULD	<u>hui, neng</u>
Permission	MAY, MIGHT CAN, COULD	<u>keyi, nenggou</u>
Volition	SHALL WILL, WOULD	<u>ken, yuanyi</u>
Prediction	SHALL WILL, WOULD	<u>jiang, dasuan</u>



Two of the above Chinese expressions should be mentioned in passing: kending/viding expressing confident inference and keneng expressing possibility. It should be noted that in Chinese grammar (Chao 1968, Ding 1979, Li and Thompson 1981), kending/viding are not considered as modal auxiliaries because 1) they cannot occur alone with the subject of a verb while a modal auxiliary can, as in wo hui (I can); 2) they cannot serve as the A element in A-not-A questions while a modal auxiliary can, as in wo gai bu gai lai (Should I come or not?) So, they are regarded as adverbs and glossed as "certainly" and "definitely". As for the expression keneng, some grammarians (Ding 1979, for example) treat it as a modal auxiliary, whereas others (Li and Thompson 1981) think it an adjectival verb. The reasons for treating it as an adjectival verb are 1) it can be modified by an intensifier; 2) it may be nominalized and 3) it may occur in sentence-initial position -- the three properties that Chinese modal auxiliaries do not have. However, whether modal auxiliaries or not, kending/viding and keneng clearly express two modal notions included in our study. And with these two notions given in the translation task, the use of the equivalent English modal expressions were expected to be elicited.

The translation task took a written instead of a spoken form. This was done out of two considerations. First, secondary students in Shanghai were not familiar with the spoken mode because of the practised English teaching and learning tradition



in which little attention was paid to the practice of spoken English. If a rarely-practised type of task was administered, students would only be too scared, thus affecting the collection of data. The second consideration was that oral response might contain numerous false starts, hesitations and other performance variables which would pose enormous difficulties for the final analysis of the data from such a large sample as the one in the present study, even though such performance variables might sometimes be quite interesting and revealing.

### 3.3.2. Multiple Choice Task

On the basis of the translation task, another elicitation task -- multiple choice in English -- was devised (cf. Appendix I). It served a supplementary purpose. As we discussed in Chapter 2 (of pp. 22-23), English modality is polylexical. One modal notion can be expressed by more than one modal verb, for instance, permission by CAN and MAY, weak obligation by SHOULD and OUGHT. Since one translation sentence could only elicit the use of one modal verb, the question of whether the subjects also knew the use of another modal verb for the expression of the same modal notion needed to be tackled by other means. The use of a multiple choice task could solve the problem. As the test design incorporated the syntactic co-occurrence patterns, there were at least two occasions for the expression of the same modal notion to occur. This made it possible for the researcher to assign different modals of the same meaning to each of the occasions.



By so doing, the subjects' ability to comprehend and manipulate different modal verbs for the same expression could be discerned.

Apart from demonstrating the subjects' ability to manipulate different modal verbs, the multiple choice task could also provide a basis for comparing comprehension and production of English modal verbs by Chinese EFL learners. Some people believe that there is always a discrepancy between one's comprehension ability and production ability and that comprehension is normally ahead of production (Fraser, Bellugi and Brown 1963, Ingram 1974). Others (Keeney and Wolfe 1972) go to the other direction, asserting that production precedes comprehension. Still others believe that comprehension and production often develop side by side (Fernald 1972, Bloom 1973). By using the translation task which is a production task and the multiple choice task which is a comprehension task, we can obtain some information concerning the relationship between comprehension and production of English modal verbs.

To make items more comparable, the English multiple choice task was developed on the basis of the Chinese-English translation task. First, the Chinese sentence in the translation task was turned into English and then a sufficient and appropriate context was built up around it. In the process of doing it, minor alterations were made on the translated sentence, whenever necessary, to ensure that the translated sentence was



74

suitable in the context. As a result, the sentence containing the modal item in the multiple choice task was either identical or similar to the intended sentence in the translation task. In each item in the multiple choice task, there were four choices, of which only one was correct. The subjects were asked to choose the one that best completed the statement both semantically and syntactically. When the multiple choice test was designed, it was handed over to four English native speakers, two British and two American, for final comments. Based on their opinions and suggestions, improvements were made and ambiguous choices were replaced. All the items were finally agreed upon and regarded as workable.

### 3.4. Characteristics of the Test Design

There were three built-in characteristics in the test design. To begin with, the tests were designed for all the 6 secondary grades to attempt, though the use of some of the modal verbs might be difficult for students of the lower grades. It is argued that by forcing a subject to form a structure which he may not have completely mastered, the researcher can gain insights into how the subject understands the language and how he organizes new constructions in his interlanguage. However, the sentences were kept as simple as possible so as to preclude the possibility of error-making on the basis of something other than the modal auxiliaries under investigation. Efforts were made to choose those lexical items which had been taught as required by



the secondary school syllabus. If an un-taught item had to be included in the test, its English form was given in the parenthesis in the Chinese-English translation test and the Chinese form in the English multiple choice test.

The second characteristic was that the study of modal verbs followed two dimensions. The first was semantic, which meant that the test items started off from the modal meanings. Unlike the item-by-item survey of children's use of modal verbs done by Major (cf. 2.3.1), the test design in the present study adopted Coates' semantic framework (cf. p. 23) of the English modal verbs and it was with the given meanings that the use of modal verbs was elicited. This was done out of the belief that as a semantic category, the English modal system is better approached from meanings or functions, rather than from form. It is also believed that in research on language acquisition, it is not enough simply to look at the form, as most past researchers did, without regarding the meaning or function a given item may be used to express.

Bahns and Wode (1980) have observed that in traditional L2 research, form rather than function has been the focus of study because researchers basically assume that the acquisition of the form implies the corresponding acquisition of the functions related to that form. However, this is not always true. In their analysis of DO-support in negation by one German



boy learning English as a second language, Bahns and Wode report with convincing data that form and function are not necessarily acquired together. "Depending on the structural type, form may precede function and vice versa." In the case of English modal verbs, because of the polysemous nature, the appearance of a certain modal verb in a language learner's language does not necessarily mean that he has mastered or acquired that modal. He may know only one meaning of the modal form, but not all. So, his use of that modal verb only reflects a partial picture. As a matter of fact, Major (1974) admitted after her experiment that the semantic change of MUST from evidential to obligational confused children and distorted children's performance. Having drawn some experience from earlier researchers, the present researcher rendered the test sentences centred around the meaning categories that Coates has suggested. The subjects' modal performance would be accepted as correct only when both the correct form and the correct meaning used with that form were given. It would not do without one or the other.

The second dimension that the present test design followed was a syntactic one. It was mentioned in the linguistic overview that modal verbs may occur in various syntactic environments, such as negation (cf. 2.2.3.) and tense-aspect (cf. 2.2.4). So, to gain a better picture of Chinese EFL learners' development and use of the modal system, including individual modal verbs' structural-semantic distribution, the investigation



should be carried out not only on learners' ability to use the unexpanded modals but also the expanded modals which result from their interaction with other syntactic patterns. Consequently, the test design, while incorporating the semantic dimension, also went along the line of syntactic patterns by including modal verbs' interaction with negation as well as progressive and perfective aspects. Other syntactic co-occurrence patterns were not taken up in the present test design, owing to the limitation of time and scope of study.

The last built-in characteristic of the test design was that the test items were not strictly paradigmatic. As was mentioned earlier (cf. pp. 6-7), the study would, in general, look at the development and use of modal verbs as a whole in Chinese EFL learners; in particular, it would examine learners' use of modal verbs in terms of meaning categories and different syntactic co-occurrence patterns. As some syntactic co-occurrence patterns are found only with some modal verbs in certain modalities (cf. pp. 30-31), it is impossible to give a neat paradigm. For instance, the cells in the matrix for denotic and dynamic modals interacting with progressive and perfective aspects, except for modals expressing contra-factive weak obligation and root possibility, had to be left blank. In the case of negation, while most modal verbs take one negated form, MUST in its obligation sense has two negated forms : MUSTN'T and NEEDN'T (cf. p. 28). The former negates the proposition, meaning



"it is necessary that... not..." whereas the latter negates the modal, meaning "it is not necessary...that...". The messiness and untidiness of the modal system (Palmer 1979) determine the complexity and asymmetry of the test design. The following is a working chart which centres around Coates' semantic framework of modal verbs as well as the syntactic co-occurrence patterns of negation and aspect.

Figure 3.2 Working Chart for the Test Items

Meanings (18)	Forms	Unexpanded	Negated	Prog.	Perf.
Strong Obligation	MUST	+	+	-	-
Weak Obligation	SHOULD OUGHT TO	+	+	-	+
Confident Inference	MUST	+	+	+	+
Tentative Inference	SHOULD OUGHT TO	+	+	+	+
Root Possibility	CAN, COULD MAY, MIGHT	+	+	-	+
Epistemic Possibility	COULD MAY, MIGHT	+	+	+	+
Ability	CAN, COULD	+	+	-	-
Permission	MAY, MIGHT CAN, COULD	+	+	-	-
Volition	SHALL WILL, WOULD	+	+	-	-
Prediction	SHALL WILL, WOULD	+	+	+	+
Hypothesis	SHOULD, MIGHT COULD, WOULD	+	+	+	+



Since there were altogether 35 cells in the chart, 35 items were provided, each assigned to one particular modal situation. Then the items were randomized in the test. In terms of modal meaning categories and the four specific syntactic environments for modal verbs, the test items were distributed as follows:

Figure 3.3                      Distribution of Items  
in Terms of Modal Meanings

Meaning	Item Number				Total
Strong Obligation	24	25	27		3
Weak Obligation	23	28	31		3
Confident Inference	8	14	30	32	4
Tentative Inference	13	18	33	35	4
Root Possibility	16	19	34		3
Epistemic Possibility	2	3	6	15	4
Ability	1	5			2
Permission	4	11			2
Volition	7	12			2
Prediction	9	21	22	26	4
Hypothesis	10	17	20	29	4
Total					35

Figure 3.4 Distribution of Items  
in Terms of Syntactic Co-occurrence Patterns

[illegible]



The item numbers applied to both the translation and multiple choice tasks, namely, the modal items to be tested under the same number in the two tasks were identical. Although the number of items for each meaning category or syntactic area differed, it did not constitute a problem in computation and comparison between items since the final score was a mean percentage score. For example, if "strong obligation" took altogether 3 items, the final total scores of all the subjects would first be divided among the entire sample and then further divided by 3, which was the number of items under this particular meaning. This was applicable to meaning category and syntactic areas alike.

### 3.5. Data Collection and Data Processing

There were 3 data collection sessions, one for each school. The physical setting for each collection was similar. The subjects who had been picked out from one secondary school, totalling 120 and spreading over the entire 6 grades, took the test at the same time of the day but in separate classrooms. In one classroom were seated 20 students from the same grade but different classes of the same school.

All the 360 subjects performed the two elicitation tasks in sequence: first translation and then multiple choice. One whole session lasted 60 minutes, 35 devoted to the former and 25 to the latter. At the time of the test, the present researcher



was not present. The test sessions were carried out under the supervision of the class-teachers. To ensure that the same procedures would be followed in the three sessions, the class-teachers were given clear and detailed instructions two days before the test. On the day of the test, the school-master of each school who the researcher had consulted with in every detail and entrusted with the task inspected the 6 classrooms to see that test procedures went on as planned. All the 360 subjects completed the two tasks and all their test papers were processed.

In data processing, the first step was to mark the papers for each correct or incorrect use of English modal verbs. An answer was considered correct only when the modal form was correctly used and the modal verb phrase was well formed. The scoring results were then transposed to a score-sheet showing individuals' accuracy scores for the modal use. A sample of score-sheets can be found in Appendix VII. The ticks stand for the accuracy score for the translation task and the triangles for the multiple choice task. The scores were then put in the computer and processed via the General Linear Model (GLM) of the SAS package(18) for one-way ANOVA and via SPSSX for t-tests.. The results are reported in Chapter 4.

Besides a quantitative analysis, some specific qualitative (and quantitative) analyses were performed on the translation task in order to study the nature of Chinese EFL



learners' interlanguage in the modal category. So, all the various answers the subjects gave were noted and grouped under each test item. The analytical framework was like this: sentences were grouped according to whether the choice of modal forms was correct or not (+M vs -M) and whether the whole modal verb phrase was target-like or not (+T vs -T).<sup>(20)</sup> For the total scores for the correct choice of modal verbs and the correct production of modal verb phrases, respectively, in the four syntactic environments, see Appendix VI. Based on the perceived variety of response types, the dominant error patterns were selected which are reported in Chapter 4 and discussed in Chapter 5.



## Chapter 4

### Results

#### 4.1. Results of General Quantitative Analyses

This part reports the outcome of general quantitative analyses, which delineates a picture of 1) the overall pattern of modal performance by our subjects across different levels; 2) their mastery of different modal auxiliaries for the expression of different modal meanings; and 3) their ability to use modal auxiliaries in 4 syntactic environments, i.e. the unexpanded situation, negation, modal progressive aspect and modal perfective aspect. All the mean accuracy scores in this part are reported in percentage and the figures are rounded off to the nearest wholes. The statistical analyses concerning ANOVA and t-tests were done via the SAS program and the SPSSx program respectively, as was mentioned in 3.5.

##### 4.1.1. General Performance of the Modal Usage

The data was first manoeuvred to obtain the overall pattern of modal usage across 6 secondary levels in both the translation (TR) and multiple choice (MC) tasks. In the study, as we said earlier, a binary scoring was used, values of "1" or "0" being assigned to a correct or incorrect answer respectively. A "1" was given to a reply if it was both semantically



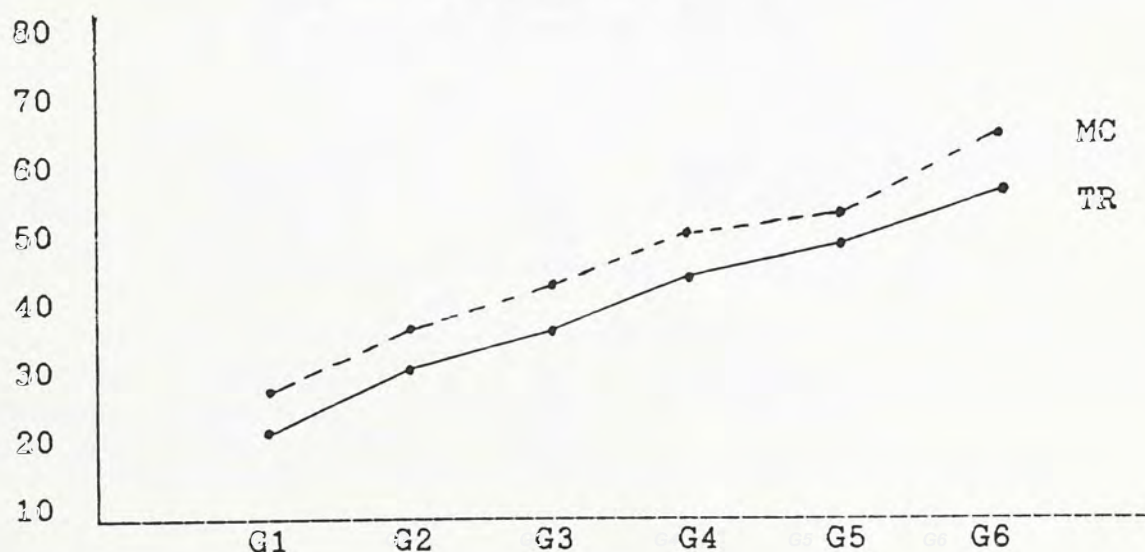
appropriate and syntactically well-formed. Without either one condition, a "0" score was given. Table 4.1 shows the total mean accuracy scores of the modal performance of the subjects in this study.

Table 4.1 Total Mean Accuracy Scores in TR and MC (%)

Task Group	1	2	3	4	5	6
TR	20	29	34	43	47	55
MC	25	34	40	49	51	62

A second way to visually display the information given is to use a line graph as shown in the following figure.

Figure 4.1 Development of English Modal Usage across the Grades



A quick glance at Table 4.1 and Figure 4.1 immediately tells us three things. First, the mean scores are rather low, with the scores for even Secondary 6 students being only 55% in



TR and 62% in MC. Secondly, a gradual progression from Secondary 1 to Secondary 6 is apparent. Thirdly, a rough comparison of the results of the two tasks shows that students of each level have scored invariably higher in MC than in TR. The range of difference between the two sets of mean scores runs from 4% to 7%.

To see whether there exists a significant difference across the whole of secondary grades, a oneway ANOVA was performed to yield the following two results.

Table 4.2            Oneway ANOVA for Total Mean Accuracy Scores

Source of Variance	Sum of Squares	Degree of Freedom	Mean Square	F	PR>F
-----					
TR					
Between Groups	42741.95	5	8948.39	58.30	0.0001
Within Groups	60403.26	354	170.63		
Corrected Total	110145.21	359			
-----					
MC					
Between Groups	53872.22	5	10774.44	68.74	0.0001
Within Groups	55482.85	354	156.73		
Corrected Total	109355.07	359			
-----					

It is clear that there is significant progress across the entire secondary spectrum. However, this composite picture does not tell us much. To see whether the significant difference lies between every two successive secondary levels, t-tests (LSD) were



performed to compare group means in the two tasks. A look at Table 4.3 tells us that differences between other grades all exceed the least significant level except for those between Secondary 4 and Secondary 5 in both tasks. So, conclusions can be drawn that students in this study, except those between Secondary 4 and Secondary 5, have all demonstrated significant progress from one grade to the next in their modal performance.

Table 4.3 Comparison of Modal Performance between Grades

Grades	TR						MC					
	1	2	3	4	5	6	1	2	3	4	5	6
Group Mean	20	29	34	43	47	55	25	24	40	49	51	62
Comparison	1-2	2-3	3-4	4-5	5-6		1-2	2-3	3-4	4-5	5-6	
Significance	+	+	+	-	+		+	+	+	-	+	
Alpha=0.05 df=354 Mean Square=170.631						Alpha=0.05 df=354 Mean Square=156.731						

So far as the relationship between TR and MC is concerned, another t-test gives us the following result, revealing a significant difference between the comprehension (MC) and the production (TR) tasks.

Table 4.4 t-test between TR Mean Scores and MC Mean Scores

Tasks	Subjects	Mean	S.D.	T	2-tail Prob.
TR	360	37.98	17.52	4.30	0.05
MC	360	43.58	17.45		



#### 4.1.2. Modal Performance in Terms of Meaning Categories

As we have discussed in the linguistic overview (cf. p. 21), there are two major categories for English modal notions: epistemic and root. So, to examine the sequence of development in terms of modal meanings, we might as well start from these two big categories.

One thing needs to be explained here. As is illustrated in our working chart (cf. p. 78), we have included 11 modal notions, of which confident inference, tentative inference, epistemic possibility and prediction are all epistemic modalities; and strong obligation, weak obligation, root possibility, ability, permission and volition are all root modalities. The last notion "hypothesis", however, may be either root or epistemic. For instance, in the sentence "If I were you, I WOULD go this afternoon", the hypothetical WOULD carries a root meaning, showing the speaker's volition. Nevertheless, in the sentence "Without your help, he WOULD still be doing his homework", the hypothetical WOULD has an epistemic reading, expressing the speaker's assumption about some going-on action. Since it is a marginal case, the "hypothesis" meaning was dropped when a comparison was made between root and epistemic modals.

Table 4.5 shows the mean accuracy scores of both epistemic and root modals achieved by students of the 6 groups in



the two tasks.

Table 4.5 Mean Accuracy Scores for Root and Epistemic Modals(%)

Group		1	2	3	4	5	6	Total Mean
Task								
TR	Root	41	44	55	65	68	72	58
	Epistemic	04	18	19	26	34	40	24
MC	Root	31	38	47	53	59	64	49
	Epistemic	21	31	35	43	47	58	39

We can make two observations from this table. First, there is definitely a steady progression from the lower grades to the higher grades in their manipulation of both root and epistemic modal verbs. Second, students' mastery of root modals as a whole is far better than that of epistemic modals and the gap between the two is more striking in TR than in MC. Significant differences between the mastery of these two big meaning categories can be easily discerned from Table 4.6, which shows the t-test result yielded .

Table 4.6 t-test between Students' Performance in Root and Epistemic Modals

Tasks	Variables	Mean	S.D	T	2-tail Prob.
TR	Root	0.58	0.19	41.68	0.0001
	Epistemic	0.24	0.20		
MC	Root	0.49	0.20	10.54	0.0001
	Epistemic	0.40	0.19		



However, it may be rightly argued that such a grouping is too general and rough, and that it is too premature a claim to make at this point that students have a better command of root modals than epistemic modals. The argument is based on the fact that our test design was non-paradigmatic, with root modals missing but epistemic modals supplied in the syntactic areas of progressives and perfectives. So, it seems fairer to select modal items only in the unexpanded and negated areas, with which both root and epistemic modals are associated. The mean accuracy scores achieved by the students in the unexpanded and negated areas are thus shown respectively in Table 4.7.

Table 4.7 Mean Accuracy Scores for Root and Epistemic Modals in the Unexpanded and Negated Area (%)

Group		1	2	3	4	5	6	Total Mean
Task								
Unexpanded Modals								
TR	Root	57	61	69	79	86	83	73
	Epistemic	15	41	37	55	64	67	47
MC	Root	29	40	48	55	66	70	52
	Epistemic	24	46	43	58	61	71	51
Negated Modals								
TR	Root	39	42	60	64	71	76	59
	Epistemic	00	08	17	22	30	34	19
MC	Root	36	42	52	51	61	63	51
	Epistemic	17	21	27	31	37	46	30



The results of the t-tests (Tables 4.8 and 4.9) show significant differences between the mastery of epistemic and root modals in the two syntactic areas.

Table 4.8 t-test of Mean Accuracy Scores for Root and Epistemic Modals in the Unexpanded Area

Tasks	Variables	Mean	S.D.	T	2-tail Prob.
TR	Root	0.73	0.20	19.85	0.0001
	Epistemic	0.47	0.31		
MC	Root	0.52	0.26	0.42	0.677
	Epistemic	0.51	0.29		

Table 4.9 t-test of Mean Accuracy Scores for Root and Epistemic Modals in the Negated Area

Tasks	Variables	Mean	S.D.	T	2-tail Prob.
TR	Root	0.59	0.26	31.24	0.0001
	Epistemic	0.19	0.23		
MC	Root	0.51	0.23	14.35	0.0001
	Epistemic	0.30	0.23		

So, no matter how we manoeuvre the data, the fact remains that students on the whole have a much better command of root modals than epistemic modals, not only in comprehension but also in production. However, there is an exception in the unexpanded area in the MC, where the performances with two types of modal verbs are almost equally good. This might be due to the fact that in the TR task with the unexpanded modals, students tend to



use the basic and simplest form to get the meaning across (i.e., the present form, which happens to be the form meant to be elicited), while in the MC task, they might be distracted by the three distractors in the test item, especially when the past tense is involved. For instance, instead of choosing "CAN do" they might choose "WOULD do" or "COULD do" whenever they see a past tense marker in the context. However, this is not a totally satisfactory answer but merely a speculation.

Then, what does the picture look like if all the modal verbs, whether epistemic or root, are compared with each other? What does the mastery scale (21) look like? Table 4.10 shows the mean accuracy scores for individual modal meanings obtained by students of the 6 levels.

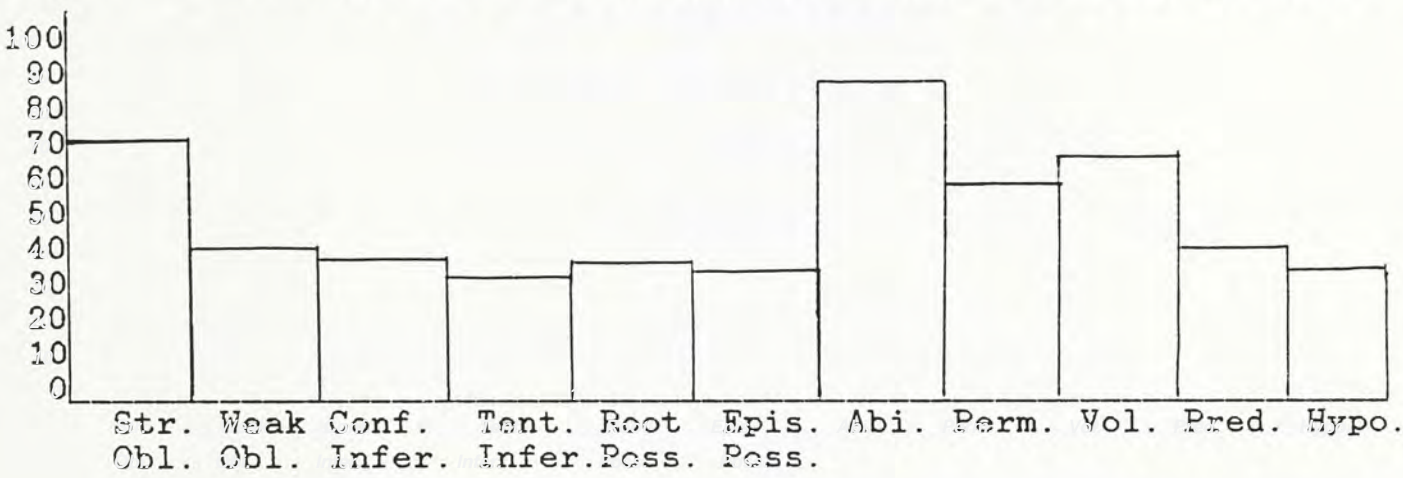
Table 4.10  
Mean Accuracy Scores  
for Individual Modal Meanings (%)

Grade	TR						MC						Total Mean
	1	2	3	4	5	6	1	2	3	4	5	6	
Meaning													
Str.Obli.	58	53	71	71	76	84	40	59	66	69	78	87	68
Weak Obli.	0	13	20	48	49	54	9	22	32	61	60	72	37
Conf.Infer.	4	18	16	30	38	48	21	32	35	53	55	74	35
Tent.Infer.	0	12	19	29	35	41	15	25	28	41	46	56	29
Root Poss.	12	17	22	39	38	44	34	31	36	36	39	46	32
Epist.Poss.	16	17	14	18	34	41	27	29	34	34	46	53	30
Ability	98	92	91	95	96	98	52	57	68	74	78	78	81
Perm.	67	49	80	80	94	87	38	20	28	24	44	44	55
Vol.	42	69	78	81	83	86	20	42	58	52	54	54	60
Pred.	0	27	28	30	30	33	21	41	46	48	42	53	33
Hypo.	0	10	13	27	13	47	17	25	31	57	37	69	28

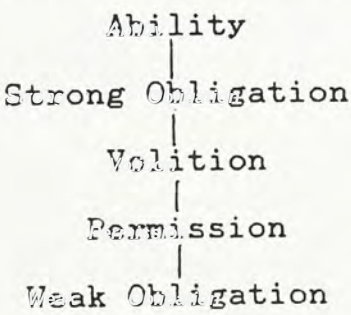


The table can be turned into a bar graph as shown in the following:

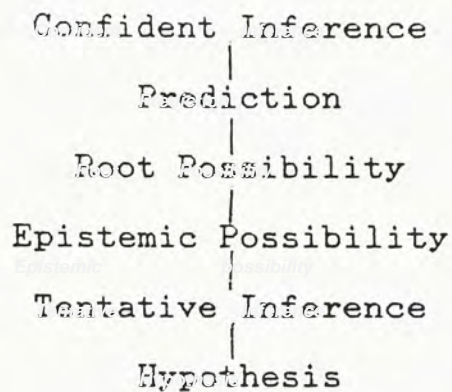
Figure 4.2 Mastery Scale of Modals Expressing Different Meanings



So, it is evident that on the mastery scale containing all the 11 modal meanings under investigation, ability is at the very top, followed by strong obligation, volition, permission and weak obligation, all of which are in the root category. Down the scale are then epistemic meanings of confident inference and prediction. Root possibility, which ranks the eighth on the scale, is the "dark horse", as it were, of the root category. Further down the scale are then tentative inference, epistemic possibility and, lastly, hypothesis. To summarize, the eleven modal meanings can thus be rank-ordered in terms of mastery:







### 4.1.3. Modal performance in terms of 4 syntactic areas

As we said in Chapter 3 (cf. pp. 76-77), our test design also followed the line of syntactic patterns of English modal verbs. Four such patterns were covered in the present study: "pure" or unexpanded modals, negated modals, modal progressives and modal perfectives. The performance of students of 6 different levels in these areas is shown in the following.

Table 4.11 Mean Accuracy Scores in the 4 Syntactic Areas (%)

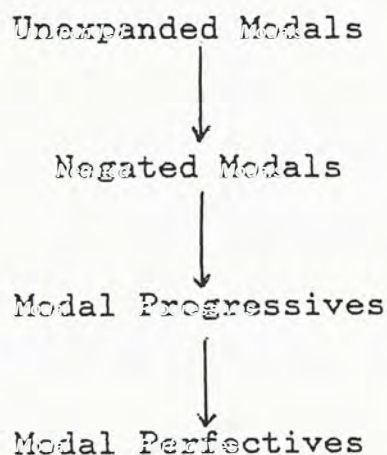
Grade Areas	TR						MC						Total Mean
	1	2	3	4	5	6	1	2	3	4	5	6	
Unexpanded	37	50	54	68	74	76	26	42	47	58	64	72	56
Negated	22	27	41	47	52	61	28	33	42	45	51	58	42
Prog.	01	17	14	11	22	32	25	35	39	50	53	63	30
Perf.	00	05	03	20	11	26	16	20	24	39	27	52	20

The above results show that students not only do better but also progress steadily in the areas of unexpanded and



negated modals. On the other hand, while students score very low in the area of modal progressives and modal perfectives, their performance is by no means steady, switching back and forth, especially from Secondary 3 onwards till Secondary 5.

According to the total mean scores shown above, these 4 syntactic areas can be rank-ordered in terms of relative mastery by our subjects, as is shown in the following:



In fact, such an order is quite within our expectation. To begin with, the unexpanded modals, being linguistically the simplest, are easier to master. Then, the negated modals, as compared with the unexpanded, have one more element in them, the negative particle NOT, hence linguistically more complex. Besides, the existence of some suppletive negated forms makes the task of choosing correct negated forms difficult (cf. 4.2.2). Further, modal progressives which require the M+BE-ING construction and modal perfectives which require the M+HAVE-EN construction are more difficult to produce than the negated



modal. Though all the three involve M+one additional morpheme, the formation of negated modals calls for the mere placement of the negative particle after the modal auxiliary while the formation of modal progressives and modal perfectives involves two successive steps: BE or HAVE added in their finite forms to the predicate and -ING or -EN inflected on the original verb. More importantly, modal progressives and modal perfectives, containing two aspects of the language, are conceptually difficult, the latter being even more so.

Oneway ANOVA shows that across the whole secondary levels, there are significant differences in performance in all these 4 areas. The f-values for these areas are 46.89, 49.48, 14.85 and 28.65 respectively in TR, and 51.64, 30.92, 17.47 and 31.76 respectively in MC at a probability level of 0.0001.

#### 4.2. Results of Specific Analyses

This part reports the results of some specific qualitative (and quantitative) analyses which were done, for the sake of clarity and convenience, along the line of the 4 syntactic environments. The purpose of such analyses was to see how Chinese EFL students actually used English modal auxiliaries and what their problems were. As TR task was a production task and therefore more revealing, the analyses were mainly based on the various response types we observed in TR. Based on the various response types, major semantic and syntactic errors were



spotted, which are presented here, together with their developmental patterns across levels, for the purpose of further discussion.

#### 4.2.1. The unexpanded area

With regard to the right choice of modal forms in this syntactic area, Table 4.12 shows the development of the eleven modal meaning categories under investigation.

Table 4.12 Correct Choice of Modal Forms Expressing Modal Meaning in the Unexpanded Area (%)

Grade	1	2	3	4	5	6	Total Mean
Meaning							
Strong Obli.	82	83	90	95	90	93	89
Weak Obli.	0	23	42	57	73	72	45
Conf. Infer.	37	67	57	80	88	92	70
Tent. Infer.	0	27	38	55	72	72	44
Root Poss.	40	50	40	55	63	58	51
Epist. Poss.	67	70	83	80	88	83	79
Ability	100	100	100	100	100	100	100
Perm.	80	82	95	88	100	97	90
Vol.	88	95	98	97	95	98	95
Pred.	30	67	73	72	67	57	61
Hypo.	0	20	40	58	40	75	39

When we compare this table with Table 4.10, we can see two similar mastery scales with slight difference. The two ends of the two scales coincide. That is, in both scales, ability, volition, permission and strong obligation receive higher scores than the rest. So, we can safely say that these meaning categories are among the first to be mastered. At the bottom of



the two scales are invariably tentative inference and hypothesis.

Since the root categories of ability, volition, permission and strong obligation are easy for Chinese EFL learners from the very beginning, little will be said about their development and use. Also, in the middle part of the scale, epistemic possibility, confident inference, prediction and root possibility, though they receive less than 50% correct scores at Secondary 1 (except epistemic possibility) immediately reach mastery over 50% of the time from Secondary 2 onwards. So, all these categories will not be put into detailed analysis. Instead, we will concentrate on the three problematic categories where we find systematic errors:

- a) tentative inference realized by SHOULD/UGHT TO;
- b) weak obligation realized by SHOULD/UGHT TO;
- c) hypothesis realized by WOULD.(22)

Tables 4.13 to 4.15 show the development and use of modal forms expressing these three modal categories. The modal form in boldface in these and all the following tables signals the correct, target form.



## a) Tentative Inference

Table 4.13 Frequency Distribution of Forms  
Expressing Tentative Inference in the Unexpanded Area (%)

	1	2	3	4	5	6
SHOULD/UGHT TO	00	27	38	55	72	72
MUST	57	27	25	17	17	18
OTHERS*	02	09	20	16	6	10
0	41	37	17	12	05	00

\*Here, "OTHERS" include such modal forms as MAY, MIGHT, WOULD, CAN and WILL.

Table 4.13 shows that Secondary 1 students do not know the use of SHOULD expressing tentative inference. As a result, most of them either make no attempt at all or use the modal verb MUST instead. Gradually, over the years, fewer and fewer of them give up their attempts to try. At the same time, there is an upward trend in the correct use of SHOULD/UGHT TO accompanied with a downward trend in the use of MUST. But still, at the last secondary level, MUST is used 18% of the time.

## b) Weak Obligation

Table 4.14 Frequency Distribution of Forms  
Expressing Weak Obligation in the Unexpanded Area(%)

	1	2	3	4	5	6
SHOULD/UGHT TO	00	22	32	55	73	72
MUST	60	22	38	20	18	13
OTHERS*	5	8	18	18	6	13
0	35	48	12	7	3	2

\*Here, "OTHERS" include MAY, WOULD, SHALL, CAN and WILL.



This table is very similar to Table 4.13. Again, none of the Secondary 1 students use SHOULD/UGHT To to express weak obligation. They either use MUST (60% of the time) or make no attempts (35%). Some other modal forms are used idiosyncratically (5%). From Secondary 2 onwards, however, more and more students exhibit the correct choice of the modal form expressing weak obligation.

### c) Hypothesis

Table 4.15 Frequency Distribution of Forms  
Expressing Hypothesis in the Unexpanded Area(%)

	1	2	3	4	5	6
WOULD	00	20	40	55	40	78
WILL	35	23	23	19	15	2
OTHERS*	22	32	19	18	28	20
0	43	25	18	8	17	0

\*Here, "OTHERS" include MUST, CAN, COULD, SHOULD. Although the latter two can also be used as hypothetical forms, they do not fit the context of our test sentences.

Obviously, the hypothetical use of WOULD is not in the knowledge of Secondary 1 students yet. Instead, the non-hypothetical form WILL is often used (35% of the time). At this secondary level, the unattempted score is as high as 43%. From Secondary 2 onwards, there is a gradual increase in the correct use of WOULD. However, a sudden drop is discerned at Secondary 5.

As for the target-likeness of the modal verb phrase in the unexpanded area, the subjects in our study have also



demonstrated stable improvement over time. However, there are still a certain number of non-target-like modal verb phrases produced by the students. A close examination of the data tells us that apart from a number of idiosyncratic errors in this area, such as the responses

He can swims.

We will goes to the park.

there is certainly one major error type that deserves our attention: the error of omitting the copula after the modal verb.

In our elicitation test, we have two test sentences containing the modal verbs followed by the copula in this area (Items 22 and 32):

This patient will be better tomorrow.

That young man must be a postman.

Quite a number of students have produced sentences like

\* This patient will (can, may, etc.) better tomorrow.

\* That man must (will, can, etc.) a postman.

Table 4.16 shows the percentage score of each secondary level for the omission of the copula in the modal verb phrases of the two sentences.



Table 4.16 Omission of the Copula in the Unexpanded Area(%)

	1	2	3	4	5	6
Omission of BE	39	18	20	14	20	10

We can see that though there is a general decrease in the copular omission error rate from Secondary 1 to Secondary 6, the decrease is in a state of flux from Secondary 2 through Secondary 5. In fact, in Secondary 5, there is a sudden rise in the error rate. Even at Secondary 6, the percentage of the copula omission error (10%) is still appreciable.

#### 4.2.2. The negated area

Students' performance in the choice of right modal forms in the negated area is on the whole poorer than that in the unexpanded area. (cf. Appendix VI) The following table (Table 4.17) presents the mean percentage scores for the correct choice of modal forms expressing different modal meanings.



Table 4.17      Correct Choice of Modal Forms Expressing  
Modal Meanings in the Negated Area (%)

	1	2	3	4	5	6	Total Mean
Str.Obl.(1)(23)	47	47	72	65	82	85	66
Str.Obl.(2)(24)	47	33	52	57	62	78	55
Weak Obl.	00	13	28	55	72	68	39
Conf. Infer.	02	03	05	07	05	23	08
Tent. Infer.	00	23	38	63	60	63	41
Root Poss.	20	28	40	45	50	62	41
Epist. Poss.	18	13	37	48	58	52	38
Ability	97	97	100	93	95	97	97
Perm.	63	48	77	75	87	82	72
Vol.	43	53	62	70	72	75	63
Pred.	10	27	50	50	52	52	40
Hypo.	00	02	07	50	08	07	12

In addition to the 3 problematic meaning categories mentioned in the unexpanded area, i.e. a) tentative inference realized by SHOULD/UGHT TO (cf.Table 4.13); b) weak obligation realized by SHOULD/UGHT TO (cf.Table 4.14); and c) hypothesis realized by WOULD (cf.Table 4.15), which continue to be problems here, 4 other negated meaning categories create new problems. These include

- d) negated confident inference (as in "That man CAN'T be Tom");
- e) negated epistemic possibility (as in "Sometimes he MAY NOT be right");
- f) externally negated strong obligation (as in "You NEEDN'T go"); and
- g) negated root possibility (as in "You CAN'T see him now").



#### d) Negated Confident Inference

Table 4.18 Frequency Distribution of Forms  
Expressing Negated Confident Inference (%)

	1	2	3	4	5	6
CAN'T	02	03	05	07	05	23
MUSTN'T	33	45	42	60	85	62
VP	23	20	30	25	00	03
OTHERS*	15	10	10	08	10	12
0	27	22	13	00	00	00

\*Here, "OTHERS" include NEEDN'T, MAY NOT, OUGHT NOT and SHOULD NOT.

As can be seen from the table, students have great problem in using the correct form CAN'T. Progress is not obvious from Secondary 1 (2% correct) through Secondary 5 (5% correct). Though there is a big jump from Secondary 5 to Secondary 6, the percentage figure is still as low as 23% at Secondary 6, the last secondary level. In place of the correct CAN'T, a considerable number of the students wrongly use MUSTN'T. The worst performance in this respect is found in Secondary 5 students.

#### e) Negated Epistemic Possibility

Table 4.19 Frequency Distribution of Forms  
Expressing Negated Epistemic Possibility (%)

	1	2	3	4	5	6
MAY/MIGHT/COULD NOT	18	13	37	48	58	52
MUSTN'T	18	42	25	20	20	22
VP	05	05	07	07	05	08
OTHERS*	18	15	17	25	17	17
0	40	25	14	00	00	01

\*Here, "OTHERS" include CAN'T, NEEDN'T, SHOULD NOT, OUGHT NOT and WON'T.



Table 4.19 reveals that at Secondary 1, when students have not quite been exposed to English modals, more non-attempted cases are found and the error of MUSTN'T for MAY NOT amounts to about 18%. At Secondary 2, however, with the decrease in the non-attempted cases, the wrong use of MUSTN'T to express negated epistemic possibility reaches its highest point (42%). But gradually, such cases give way to either the correct responses or random errors. Though at Secondary 5 and 6 over 50% of the responses contain the correct form MAY NOT, still, as many as over 20 of the responses retain the use of MUSTN'T. Such a rate is noticeable.

f) Externally Negated Strong Obligation

Table 4.20 Frequency Distribution of Forms  
Expressing Externally Negated Strong Obligation (%)

	1	2	3	4	5	6
NEEDN'T	47	33	52	57	62	78
MUSTN'T	33	30	27	20	20	07
WON'T	00	18	10	9	08	05
OTHERS*	05	07	07	08	05	10
0	15	12	04	06	05	00

\*Here, "OTHERS" include CAN'T, BE NOT GOING TO, WOULD NOT, MAY NOT, SHOULD NOT and MIGHT NOT.

The two favoured forms here are the correct NEEDN'T and the incorrect MUSTN'T. The progress in the correct use is on the whole steady, except at Secondary 2, where a drop in the use of NEEDN'T accompanied by a rise in the use of WON'T is found. From



Secondary 3 onwards, there is an obvious and stable upward trend in the correct form till at Secondary 6 where the majority get the target form.

#### g) Negated Root Possibility

Table 4.21 Frequency Distribution of Forms  
Expressing Negated Root Possibility (%)

	1	2	3	4	5	6
CAN'T	20	29	40	45	50	62
MAY NOT	07	27	23	22	36	08
MUSTN'T	30	03	00	07	05	07
OTHERS*	08	08	13	15	03	23
0	35	33	24	11	06	00

\*Here, "OTHERS" include NEEDN'T, COULD NOT, MIGHT NOT, WILL NOT and SHOULD NOT.

We can see that MUSTN'T is wrongly used here about one-third of the time and the correct form CAN'T only one-fifth of the time by Secondary 1 students. From Secondary 2 onwards, the use of MUSTN'T gives way to the use of MAY NOT, a form used to express negated epistemic possibility. Such a use reaches its peak at Secondary 5. At the last Secondary level, while the correct form is used over 50% of the time, much of the use of incorrect MAY NOT is replaced by various other modal forms.

With regard to target-likeness of the modal verb phrase in this area, two major types of syntactic errors are found. The first kind is again the copular omission error. In our study, there are three negated test sentences containing the copula



after the modal (Items 3, 14 and 35):

- Sometimes he may not be right.
- He should not be in the office now.
- That man over there can't be Tom.

A considerable number of students drop the copula. Table 4.22 shows the percentage scores for the omission of the copula across the 6 levels in these three sentences.

Table 4.22 Omission of the Copula in the Negated Area (%)

	1	2	3	4	5	6
Omission of BE	26	21	23	14	26	15

The pattern shown in Table 4.22 is similar to that in Table 4.16. Again, while a decrease in the copular omission error rate is observable, the decrease is in a state of flux from the first to the last secondary level. In fact, a sudden rise in the error rate at Secondary 5 can be found in both tables. It will be recalled that in the overall developmental pattern of the modal usage, there is no significant progress between Secondary 4 and Secondary 5 students (Table 4.3). Perhaps the copular omission errors committed by Secondary 5 students have pulled down their total score, thus doing a disservice to their overall performance. At Secondary 3, 15% of the copular omission error are still found, a sign showing that such an error is a persistent one and merits attending to.



The other interesting error type in the negated area is the modal co-occurrence error. Such an error is committed especially by students of the lower levels. As is mentioned in the linguistic overview (cf. p. 14), modal verbs do not co-occur with other modal verbs within the same clause. Similarly, they do not co-occur with the auxiliary DO or finite verb forms of BE. In our study, however, errors like the following can be found.

- \* They will can't give the book to him.
- \* They will don't give him the book.
- \* That man over there must isn't Tom.

Table 4.23 shows the total distribution of such an error type.

Table 4.23 Total Distribution of Modal Co-Occurrence Errors

	1	2	3	4	5	6
M + M + NOT	18	25	16	1	0	0
M + ISN'T	17	12	15	6	3	2
M + DON'T	10	11	4	1	4	1
Total	45	48	35	8	7	3

Here, we can discern a relatively steady decrease of the error rate across levels. The decrease becomes sharp at Secondary 4. This leads to an obvious contrast between Secondary 1 to Secondary 3 which comprise the junior stage of secondary schooling and Secondary 4 to 6 which make up the senior stage.



So, as far as the modal co-occurrence error is concerned, the whole of Secondary levels can be conveniently divided into two stages of development.

#### 4.2.3. The progressive area

In this section and the following, only the syntactic pattern will be looked at, since students' performance in the choice of modal forms is similar to that in the unexpanded area. The problem in this area, as we can see, lies not so much in the choice of modal forms as in the target-likeness of the modal verb phrase. What impresses us is that though there appears a general development, scores for the target-like modal verb phrase are very low, with only 7% correct among Grade 1 students and 40% among Grade 6 students (Appendix VI) It is also interesting to note that accompanied with a downward trend in non-attempts and an upward trend in target-like modal phrases, the scores for non-target-like phrases remain more or less at the same level across the 6 levels.

A close inspection of the data tells us that attributable to the very high scores of the non-target-like modal verb phrases is the omission of the expansion of modal progressives of one kind or another. For example, for the intended target-like sentence "My sister must be playing the piano now" (Item 30), students produce sentences like

- (1) My sister must play the piano now.



- (2) My sister is playing the piano now.
- \*(3) My sister must playing the piano now.
- \*(4) My sister must be play the piano now.

Though Sentences (1) and (2) are grammatically correct when they stand alone, they are not target-like in the context. Sentences 3 and 4 are nonce errors in our data and therefore can be collapsed into non-target-like responses under the heading "others". Table 4.24 shows the frequency distribution of various response types in the modal progressive area.

Table 4.24 Frequency Distribution of Response Types  
in Modal Progressives (%)

	1	2	3	4	5	6
M + BE +ING	02	18	17	15	25	40
M + V	49	36	34	48	56	44
BE + V-ING	16	16	25	13	02	04
OTHERS	04	11	14	19	14	12
0	29	19	10	05	03	00

The above table reveals that the prevailing syntactic error pattern in this area is the total omission of the progressive expansion. That is to say, the simple M+V pattern is generally used in place of progressive aspect. The result of using such a pattern for the required BE-ING pattern is that the semantics of the sentence is affected from an epistemic to a root reading. For example,

My sister must be playing the piano now.

(Epistemic  
inference)



My sister must play the piano now.

(Root  
obligation)

So, the syntactic error is made at the expense of the distortion of the meaning of the sentence. Semantic value shifts with the omission of the modal auxiliary expansion.

#### 4.2.4. The perfective area

Students have a lot of difficulties in producing target-like modal perfective verb phrases (Appendix VI). In fact, their scores for target-like modal phrases are the lowest of all the four syntactic areas. Similar to the situation in the progressive area, what contributes to the very poor performance is the omission of expansion of the perfective modal verb phrase. Though sentences like

(1) \*She should received my letter by now.

(2) \*He must forgotten his key at home.

can be found occasionally which are grouped under the heading "others", the dominant deviant response is the use of the simple M+V pattern to replace the M+HAVE-EN pattern.

(3) She should receive my letter by now.

(4) He must forget his key at home.

Though Sentences 3 and 4 can be grammatically correct when they stand alone, they do not fit the intended situations of "given the necessary facts, it is time that she received my letter" and "It is necessarily true that he has left his key at home". Very insensitive to the perfective use of modal verbs, our students



have erred a great deal. Table 4.25 gives us the frequency distribution of response types.

Table 4.25 Frequency Distribution of Response Types  
in Modal Perfectives (%)

	1	2	3	4	5	6
M + HAVE +EN	00	07	04	16	14	30
M + V	45	43	55	56	67	51
HAVE + V-EN	12	12	14	08	03	05
OTHERS	04	05	07	10	11	11
0	39	33	20	10	05	03

Here, not a single response at Secondary 1 contains the well-formed perfective modal verb phrase. This can easily be explained by the fact that perfective aspect has not been taught by then (cf. p.67). But, even when it has been taught, students' ability to form target-like perfective modal phrases is still very low. Only 7% of the responses are correct at Secondary 2. After that there appears a state of flux until Secondary 6 when only 30% of the responses contain the correct M+HAVE-EN pattern and as many as 51% of the responses carry the erroneous M+V pattern. Again, the non-use of modal perfectives in sentences which require the perfective modal phrase totally alters the meaning of the sentence. For example,

He must have left his key at home. (Epistemic inference)

He must leave his key at home. (Root obligation)

### 4.3. Summary

Quantitative and qualitative analyses have been performed



to provide us with a general idea about the development and use of the English modal auxiliaries in Chinese EFL learners. As can be seen, some interesting findings have been yielded. First, the English modal auxiliaries are difficult for Chinese EFL learners. Second, root modals are better mastered than epistemic ones. Third, certain semantic and syntactic error types have been detected. All these will be discussed in the next chapter.



## Chapter 5

### Discussion

In the light of the results presented in the previous chapter, we will examine here the seven research questions that were posed at the beginning of the thesis (cf. pp.6-7). However, these questions will not be answered one by one. Instead, they will be collapsed into five major issues and discussed below. These issues include: 1) English modal auxiliaries as a learning burden; 2) modal comprehension vs modal production; 3) root modals vs epistemic modals; 4) profile of major semantic errors and the transfer account; 5) profile of major syntactic errors and the transfer account.

#### 5.1. English Modal Verbs as a Learning Burden

Our study has clearly shown that Chinese EFL learners' use of modal auxiliaries is on the whole very unstable. Their mastery is poor. As Table 4.1 (cf. p.84) shows, when judged by both semantic and syntactic criteria, Secondary 1 students only get one-fifth of all the items correct in TR and one-fourth correct in MC. Even at the last year of secondary schooling, Secondary 6, students get only a little over half of the items correct in TR and two-fifths correct in MC.



Such poor performance by our EFL learners has confirmed the claims by linguists and EFL teachers that the English modal system poses a learning burden to EFL learners (cf. pp. 4-5). It also corroborates the findings from some studies done on English L1 acquisition that English modal verbs are acquired relatively late. For example, Coates (1987) notices that "at the age of five, when they are said to be linguistically competent, children have not mastered the adult system of modal meaning." Stephany (1986) says that in L1 acquisition "modal auxiliaries emerge relatively late". Wells (1974) and Perkins (1983) have made similar comments (cf. 2.3.2 and 2.3.3). The fact that late acquisition of this grammatical category by children learning English as their first language coincides with the poor mastery of our Chinese EFL learners is interesting.

One reason behind the late acquisition in L1 has been suggested by Perkins (1983). He holds that language is used by children to express the cognitions of their environment -- natural and social -- and so children cannot begin to use a given linguistic form meaningfully until he is able to understand what it means. Modality as a universal concept concerns people's thoughts rather than real life. So, the use of modal forms expressing modality automatically involves knowledge of both natural and social laws. This entails sound cognitive ability and experience of the world. When acquiring their first language, young children have limited experience of the world.



This results in their inadequate knowledge, which in turn delays their acquisition and use of modal forms. Only with the accumulation of experience will children gradually master the "fully developed" modal system.

Whether this explanation is truly applicable to our subjects is debatable, for, after all, our subjects, who range in age from 12 to 18, already have sound cognitive abilities and are not inexperienced with the outside world. However, putting this aside, we do find another possible reason which may contribute both to the late acquisition in L1 and to the poor mastery in L2 of the English modal system. That is the linguistic complexity of the modal system. Our results have shown that as a complex and untidy grammatical category, the English modal system causes learning difficulties. Such difficulties rest in both the semantic and syntactic domains.

With regard to modal semantics, we have shown in the linguistic overview (cf. p. 23) that there is no exact one-to-one correspondence between modal notions and forms. Polysemy and polylexy characterize the English modal system. When a second language learner has first learnt a form, he may not have mastered all the meanings of the form. Conversely, when a learner is aware of a modal notion, he does not necessarily know the various forms which can be used to express the same notion. For instance, in our study, we have the modal notion of epistemic



possibility and we have distributed all the three possible forms MAY/MIGHT/COULD in different items in the MC task. Though most of our subjects can understand the possibility meaning of MAY quite well, they have trouble in understanding the same meaning expressed by MIGHT and COULD. In the two test sentences containing MIGHT and COULD respectively (Items 3 and 15), even our Secondary 6 students get less than 50% correct. The rest either choose MUST or CAN. With regard to modal syntax, we have also demonstrated in the linguistic overview (cf. 2.2.3 and 2.2.4) that the interaction of modal verbs with other syntactic patterns make the already complex modal system even more so. Our results show that our subjects' poor performance lies not only in the choice of modal forms but also in the formation of modal verb phrases. In fact, syntactic problems seem to be greater, especially in the areas of modal progressives and modal perfectives. This can be seen in Appedix VI, which delineates the overall picture of the production rate of target- and non-target-like modal verb phrases in the four syntactic areas. The high rate of non-target-like modal verb phrases has considerably pulled down the total score of each secondary level. It is observed that even if a learner knows a modal form and has established a sound form-function mapping, it does not guarantee that he can form target-like modal verb phrases to fit a certain context. They will make different types of errors in different syntactic contexts.



As for the major semantic and syntactic errors observed in our modal study, we will discuss them in 5.4. and 5.5.

## 5.2 Epistemic Modals vs Root Modals

One finding of the present study is that, overall, root modals are better mastered than epistemic modals. There are two pieces of evidence for this claim. The first one comes from the mean scores achieved in the four syntactic areas which are taken as a whole (Table 4.5), and in the unexpanded and negated areas respectively (Table 4.7). These scores have shown that the root modals are better mastered than epistemic modals and that the difference between the two are statistically significant (Tables 4.6, 4.8, 4.9 ). The other piece of evidence is that whenever a modal form can express either a root or epistemic sense, it is the root sense that receives the higher score. To be objective, we may look at only the choice of modal forms in the unexpanded area in TR, without regarding the grammaticality of the modal verb phrase. That is to say, we may look at the use of pure modal forms without bothering about the syntactic factor (Table 4.12). The fact is that our subjects, when taken as a whole, master WILL/SHALL/GOING TO expressing root volition (94% correct) far better than WILL/SHALL/BE GOING TO expressing epistemic prediction (61% correct); MUST expressing strong obligation (89% correct) better than MUST expressing confident inference (70% correct); and SHOULD/UGHT TO expressing weak obligation (45% correct) slightly better than SHOULD/UGHT TO expressing



tentative inference (43% correct).

One interesting thing to note is that in L1 acquisition of the English modal system, root modals are also reported to be acquired earlier than epistemic modals. For example, Fletcher (1979) reported that his subject, aged 2;0, first used in his spontaneous speech such modal forms as CAN, CAN'T, WILL and WILLN'T. The subject used them either for himself (to indicate willingness, inability or request for permission) or to allow or to disallow an action by his addressee (cited in Perkins, 1983). All these were clearly root meanings. Wells (1979) declared that at the age of 2;6, children used CAN for ability sense and WILL for intention (volition) sense. Again, these two were root senses. Only at the age of 3;00 did children begin to use WILL in the epistemic sense of prediction. Kuczaj (1977) (cited in Hirst and Weil, 1982) reported that children between 2;6 and 3;6 produced in normal conversation more utterances with root modals than with epistemic modals. For example, the root modals of permission were used quite frequently by children as young as 2;6, whereas the epistemic modals of possibility did not occur frequently in his corpus until 3;3.

Stephany (1986) has attributed the later development of epistemic modals to their cognitive complexity. He asserts,

Epistemic modal meanings develop later than deontic ones in language acquisition. As the linguistic



forms serving to convey epistemic modality are of the same type as those used to express deontic modality and are to a large extent even identical with them, the reason for the later development of epistemically modalized utterances cannot be sought in linguistic complexity but must rather lie in cognitive complexity.

(Stephany 1986, p.393)

As we know, epistemic modality is essentially related to the notion of possibility and involves a distinction between reality and subjective reasoning based on certain conditions. Studies on cognitive development shows that possibility and reality are distinguished from one another at about 2 or 3 to about 7 or 8 years old (what Piaget calls the 'preoperational stage') and that "the capacity to reason on the basis of hypothesis" (what Piaget calls the 'formal operation') is not quite developed until as late as 11 to 12 years old. So, cognitively speaking, young children are not ready for reasoning or making assumptions. Hence the later development of epistemic modals.

From a markedness point of view (cf. pp. 52-53), since epistemic modals involve the speaker's intellectual reasoning and assumption and thus more processing time is needed and heavier cognitive load is imposed, they can be regarded as more marked when judged by the complexity criterion. According to the markedness theory, the more marked forms are normally acquired later.



The coincidence of earlier acquisition of root modals in L1 and earlier mastery of root modals in L2 is interesting. As is just mentioned, the sequence of development in L1 for root and epistemic modals as two gross categories is explained by cognitive complexity. What interests us here is that, unlike young children in L1 acquisition, our Chinese EFL learners in this study are already fully developed cognitively and have full capacity for reasoning. They already have both root and epistemic notions at their disposal and can express them freely and equally well in their mother tongue Chinese. However, when they are learning the modal system of a foreign language, they still repeat the developmental pattern of root modals preceding epistemic modals found in L1 modal acquisition. We may mention here that Lightbown (1980) has discovered something similar. In her study of the acquisition of Q-words in L2, she obtained a developmental sequence similar to that found in L1 acquisition. While the sequence in L1 acquisition has been attributed to the cognitive complexity with each Q-word, Lightbown notices that L2 learners have already been able to use various Q-words quite well in their mother tongue. They have full ability to produce various kinds of questions equally well. Yet, they still repeat the same L1 developmental pattern when they are learning an L2.

So, a tentative conclusion, it seems, can be drawn here that despite their sound cognitive ability second language learners seem to have a propensity to repeat the general sequence



of development found in L1 acquisition. What is cognitively complex, thus marked, and later acquired in L1 tends to be mastered later in L2. As Berent (1985) has observed

...it may very well be that a structure or an aspect of meaning which is cognitively complex in the context of first language acquisition is marked in the context of second language acquisition (and in first language acquisition as well).

(Berent 1985, p.365)

### 5.3. Modal Comprehension vs Modal Production

In our modal study, if we look at the total mean scores, we find that students' performance in the MC comprehension task is on the whole better than that in the TR production task (Table 4.1 & Figure 4.1). At all the six levels, scores achieved in MC are invariably higher than those achieved in TR. However, if we look at the epistemic and root categories separately (cf. Tables 4.5, 4.7), we discover that while our subjects' performance with epistemic modals is better in MC (comprehension) than in TR (production), the reverse is the case with root modals. That is, our subjects' performance with root modals is better in TR than in MC. Such a discrepancy between modal comprehension performance and production performance reveals, to some extent, that the relationship between comprehension and production is not static or straightforward.

As we have mentioned in 3.3.2, it is generally accepted that language comprehension is easier than language production



and, consequently, the former is thought to precede the latter. This position was prevailing in earlier L1 and L2 studies. However, as Ingram (1974) points out, this traditional view has met with challenges and undergone radical shifts. Such shifts have ranged from the assertion that the relationship between comprehension and production is one of mutual dependence to the claim that production precedes comprehension (cf. p.73). For all these three claims there has been empirical evidence.

The classic L1 study cited as evidence of comprehension ahead of production is that of Fraser et al. (1963). After their study, there have been various kinds of research with similar findings. For example, Shipley et al. (1969) studied the comprehension of some holophrastic and telegraphic children<sup>(25)</sup> by asking them to follow a few commands. They found that children tend to respond more readily to speech at or above their own productive limit. Based on this, they confirmed the claim that comprehension is ahead of production.

However, Fernald (1972) showed in his replication of the study done by Fraser et al., after employing a different scoring method, that comprehension and production are close to each other, with no significant difference between the two. Bloom (1973), furthermore, claimed that understanding (comprehension) and speaking (production) both depend on the same underlying information (competence) and do not develop separately but depend



on one another.

Some other studies have even attempted to show that production exceeds comprehension, a radical viewpoint against the commonly accepted position. The first study of this kind in L1 acquisition was, as Ingram (1974) points out, that of Keeney and Wolfe (1972), in which children were examined on the production, imitation and comprehension of subject-verb agreement in English. Poor performance was found on the comprehension task, thus the conclusion of production ahead of comprehension.

So, it can be seen that the relationship between comprehension and production is not a straightforward one and it cannot be said for sure that one precedes the other. In fact, the complication of the relationship between comprehension and production is exemplified in Berent's study. Berent (1985) once conducted an experiment to assess adult L2 learners' production and comprehension of three types of English conditional clauses: real conditions, unreal conditions and past unreal conditions. He found a difference in the order of difficulty in production and comprehension. In production, the order from the least to the most difficult was "real", "unreal" and "past unreal": in comprehension, however, the order was "unreal" and "past unreal" (equal), and "real". Real conditions which were the easiest to produce became the most difficult to comprehend. A disparity between production and comprehension was thus revealed. To



explain this interesting difference, Berent resorted to the markedness account, claiming that "inferences associated with unreal conditions were easier to judge than inferences associated with real conditions". Of course, whether Berent's explanation is sound or not awaits further research. We are here only using this example to show that it is too premature a conclusion that comprehension always precedes production. Many factors may intervene in the process of comprehension and production, resulting in the difference in order of difficulty in comprehension and production.

With the increase of the interest in the process involved in language development, however, deeper and more interesting questions than whether comprehension precedes production or vice versa have begun to emerge (Bloom 1974). In particular, researchers would like to know what comprehension strategies are used in the acquisition process and what factors contribute to understanding messages. A large bulk of research can be found concerning this respect. Among various findings, one strategy is obvious, i.e., the learner employs prior knowledge as well as the contextual information in the process of comprehension.

In our modal study, while the fact that comprehension is better with epistemic modals but production is better with root modals has provided another incidence of the non-static or non-



straightforward relationship between comprehension and production, the reason why this is so is not clear. Nevertheless, there might be two tentative explanations. First, it is more difficult to create appropriate modal verb phrases associated with epistemic modals than with root modals. As we know, root modals are conceptually simpler (cf. 5.2) and the choice of correct forms is less difficult. Besides, root modals interact with other syntactic patterns in a much simpler way than epistemic modals: root modals occur with action verbs only, but epistemic modals occur with state, process and action verbs (cf. pp. 21-22); root modals do not, in all likelihood, occur in progressives or perfectives, but epistemic modals do. The more complex the modal verb phrase is, the more difficult it is to produce. Though the "inadequate processing of form does not impede understanding and is not readily observable" in comprehension (Wang 1986), it will lay bare in production. In fact, our data reveals a wide discrepancy between comprehension and production in modal progressives and modal perfectives. When the progressive and perfective forms are given as possible candidates for choice in MC, students' attention is drawn to the aspect, and based on the context, they can select the appropriate response. However, in TR, though the progressive and perfective meanings are given, students are not able to create target-like forms owing to their proficiency with the language.

The second possible reason is that epistemic modals are



more contextually-bound. In our MC task, adequate context is provided. For example, Item 8 runs as follows:

Mr. Smith has just opened the window of his house and is climbing ( up ) inside. He \_\_\_\_\_ his key.

- |                 |                          |
|-----------------|--------------------------|
| a. must forget  | b. should have forgotten |
| c. would forget | d. must have forgotten   |

When sufficient context is given, students may use their prior knowledge to process the information efficiently. As we know, epistemic modals concern people's assumption and reasoning based on conditions. Once the conditions are specified, comprehension is facilitated. In the above example, our students might have associated the situation of "opening the window" with "climbing inside". According to their experience and knowledge, students can assume that Mr. Smith does not have his key with him. That makes them choose the modal verb phrase "must have forgotten", which indicates the certainty that Mr. Smith has forgotten his key. The contextual information, which our subjects can fully employ, clearly brings out the epistemic meaning. Of course, saying that epistemic modals are more contextually-bound does not mean that root modals are not. But we do suspect that context helps with the former more than the latter. This point needs to be further tested.

#### 5.4. Profile of Major Semantic Errors and the Transfer Account

As we said in the literature review (cf. 2.4), language transfer is one of the determining factors for SLA. It may



embrace both interlingual and intralingual transfer (cf. 2.4). In our study, evidence exists suggesting that language transfer has played a part in Chinese EFL learners' modal interlanguage development. This point can be illustrated first by the semantic errors that have been detected in the study.

When leaving aside those highly idiosyncratic errors, we may find altogether seven major semantic error types in our study (cf. 4.2.1 & 4.2.2). While some error types may be regarded as a result of interlingual transfer, others are mainly caused by intralingual transfer which may also be referred to as over-generalization (cf. p.59).

For instance, in the cases of tentative inference, weak obligation and hypothetical meaning, we find semantic over-generalization from one form to another (cf. Tables 4.13--4.14). As we know, tentative inference and weak obligation are realized by SHOULD/UGHT TO. However, since Secondary 1 students have not been taught this form, they do not have the intended form in their repertoire. As a result, while some of them simply avoid the use of it by making no attempt at all, other students transfer the form MUST to the place wherever SHOULD/UGHT TO are required (cf. Tables 4.13 and 4.14). In other words, they overgeneralize the use of MUST, which is one of the few modal forms available to them then, to express tentative inference and weak obligation. As students go up to the higher grades,



instances of the overgeneralized use of MUST gradually decrease since they begin to have the target form in their vocabulary and the form-function mapping improves with the increase of their language experience. A similar phenomenon can be found in the case of the hypothetical meaning realized by WOULD (cf. Table 4.15). When Secondary 1 students do not have the form for the expression of it, they use the form WILL instead. Such overgeneralization continues across the whole secondary levels though the cases decrease over different levels.

It should be noted here that in all the three aforementioned cases, students overgeneralize the use of a form which is in the same semantic domain as the intended form. MUST and SHOULD/UGHT TO are both expressions of obligation and inference. They differ only in degree. WILL and WOULD both express prediction or volition. They differ only in hypothetical/non-hypothetical use. So, students do not generally overgeneralize randomly any modal forms. They select the ones that share some semantic features with the target form. Obviously, the linguistic liberties taken by our struggling EFL learners illustrated here should not be regarded as a deviant process of language learning. Instead, it is a productive/'compensatory' (26) strategic effort to use the language.

Our results have reported four other semantic error types



in the negated area (cf. Tables 4.16-4.19) caused by interlingual transfer. In fact, modal negation presents some learning problems to Chinese EFL learners. As we discussed in 2.2.3, the relative ordering at the surface level in English, different from Chinese, cannot signal different modal negation scopes and, consequently, different modal forms are sometimes required to express the same modal notion in different scopes of negation. It is the choice of different modal forms for different scopes of negation that confuses our Chinese EFL learners.

In our data, a very high rate of error is found with MUST expressing confident inference when it is negated. In Chinese, the notion of confident inference is realized by the modal expression yiding or kending (definitely/certainly) (cf. p. 70). To obtain negation, either yiding bu or bu yiding is used, the former negating the proposition and meaning "It is necessary that...not..." and the latter negating the modality and meaning "It is not necessary that...". For example,

- 1.a. Neibian de nei ge ren yiding bu shi Tom.  
(There that CL man CERTAINLY NOT is Tom.)
- b. That man CAN'T be Tom. (It is necessary ... not ...)
- 2.a. Neibian de nei ge ren bu yiding shi Tom.  
(There that CL man NOT CERTAINLY is Tom.)
- b. That man MAY NOT be Tom. (It is not necessary that ...)

As can be seen, in the two Chinese sentences, the modal



expression yiding (certainly) expressing confident inference is not changed. What is changed to effect different scopes of negation is the different positioning of the negative particle. Carrying over this L1 rule to English modal negation, the Chinese students find themselves first confronted with the task of choosing the correct form for expressing yiding. Though both the English modal adverb certainly and the modal auxiliary verb MUST are its meaning equivalents, it is observed that the Chinese EFL learners are more likely to associate the Chinese adverb yiding with the English modal verb MUST. There seems to be a kind of canonical mapping here. Two possible explanations can be given here. One is that English modal auxiliaries, being members of the verb phrase, are less marked in terms of productivity. But so far there is no theoretical support for this explanation. The other possible explanation is that modal verbs like must have been explicitly taught and drilled whereas adverbs like certainly are given much less attention in teaching.

Having chosen the English modal auxiliary MUST to express the same notion of confident inference as yiding in Chinese, our Chinese learners take it for granted that to express the idea of yiding bu, the form MUST should be retained and what they need do is to attach the negative particle NOT to MUST as they attach bu to yiding in Chinese. Here interlingual transfer takes place. If we look at Table 4.18, we find that percentage for such a transfer error increases over the six levels and reaches its



highest point at Secondary 5. This is because many students at lower levels simply make no attempts or use the simple VP pattern. As they go up to the higher levels, they make attempts anyway and the non-attempt scores give way to the scores for MUSTN'T, a form they think to be appropriate. The transfer of MUSTN'T for CAN'T remains dominant among Secondary 6 students, over 50% of whom have erred. The same error pattern is also found in the MC task where altogether around 50% of the subjects substitute the incorrect MUSTN'T for the correct CAN'T. This points to the fact that such a transfer error is a persistent one.

Logically speaking, as we mentioned in the linguistic overview (cf. pp. 26-27), NECESSARY NOT (It is necessary that...not...) is equal to NOT POSSIBLE (It is not possible that...). Conversely, NOT NECESSARY is tantamount to POSSIBLE NOT. In Chinese, NECESSARY NOT in the epistemic sense, i.e. confident inference, is expressed by yiding bu, and POSSIBLE NOT in the epistemic sense, i.e. epistemic possibility, is realized by bu yiding. In English, the former is expressed by CAN'T and the latter MAY NOT. As we have just shown, Chinese EFL learners tend to make transfer errors and use MUSTN'T to express NECESSARY NOT -- negated confident inference. Similarly, transfer errors are found for the expression of POSSIBLE NOT --negated epistemic possibility. When translating Sentence 3, for example,



Ta        youshi        bu        yiding        zhengque.  
 (He       sometimes       NOT       CERTAINLY       right.)

Sometimes he MAY NOT be right.

our Chinese subjects, instead of using the correct form MAY NOT, use the modal form MUSTN'T. It may be tentatively hypothesized that the first step in translating this sentence is to select the modal form. Since the Chinese EFL learners tend to associate the Chinese yiding with the English MUST(cf.p.130), they readily pick up the form MUST. Then, knowing that the negative particle in an English modal sentence is always post-positioned, they use the negative form MUSTN'T for internally negated possibility (It is possible that...not...). Again, we regard such an error as a transfer error, because the use of the same modal form preceding or followed by the negative particle to negate possibility or confident inference in Chinese respectively has misled the learner to employ the same modal form in English. To put it another way, with regard to scopes of negation, the learner uses the same form when two different ones are actually required to express internal and external negation: CAN'T for NECESSARY NOT/NOT POSSIBLE and MAY NOT for NOT NECESSARY/ POSSIBLE NOT.

A less serious modal error in the semantic domain is the use of the same form MUSTN'T for internally and externally negated strong obligation. In English, we may lay obligation for someone not to do something (internal negation) or lay non-obligation for someone to do something (external negation) (cf.



p. 31) and two different forms plus the negative particle NOT are used: MUSTN'T indicating the former case and NEEDN'T the latter. In Chinese, we may also indicate the two scopes of negation and several different forms can be used. To negate obligation externally, bu bi and bu yidingde are used, and internally, bu de. In our test, two items (Items 24 and 25) were provided to elicit the use of MUSTN'T and NEEDN'T.

- 1.a. Tamen      mingtian      bu      bi (yidingde)      lai.  
       (They      tomorrow      NOT      MUST      MUST      come.)      come.)
- b. They NEEDN'T come tomorrow.
- 2.a. Ni      xianzai      bu      de      chu      qu.  
       (You      now      NOT      MUST      go      out.)      out.)
- b. You MUSTN'T go out now.

While our students do not generally err when producing (2b), quite a number of them (cf. Table 4.20) make errors in (1b), retaining the form MUSTN'T where NEEDN'T is required.

Such an error may also be tentatively regarded as one caused by L1 transfer. As we know, bu bi is in fact the shortened form for bu+bixu, and bixu finds MUST as its equivalent in English. Similarly, in the expression bu yiding de, yidingde can be rendered directly into MUST in English. Not sensitive to the fact that negating strong obligation internally and externally in English calls for two different modal verbs, our students use MUST for both cases. Their choice of the modal form is much influenced by their Chinese knowledge.



In our total results (cf. p. 92), "root possibility" is reported to be the "dark horse" of the root category because of the low correct scores it received. In fact, what makes it occur at the lower end of the mastery scale is the wrong use of its negative form. As we know, while epistemic possibility is paraphrased as "It is possible that...", root possibility is paraphrased as "It is possible for...". According to Coates (1983), while CAN/MAY (and their past forms COULD/MIGHT) can all indicate root possibility in the affirmative sense, only CAN (and its past form COULD) can be used in the negative sense. For example,

1. I am free tomorrow, so I CAN/MAY come.  
...it is possible for me to come.
2. He is out of town now, so you CANNOT see him.  
...it is not possible for you to see him.

cf. You MAY NOT see him now. = You are not allowed to see him now.

In Chinese, however, no distinction is made between root and epistemic possibility so far as the modal form is concerned. Whichever possibility it is, the modal expression keneng is used and the negative form is keneng plus bu. Therefore, once the learner knows that keneng equals MAY in expressing possibility, he tends to use it both in the affirmative and negative situations without regarding whether it is epistemic or root



possibility in English. However, such a transfer error is not obvious at Secondary 1 (cf. Table 4.21). At this level, the majority of the students either make no attempts at all or use another deviant form -- MUSTN'T. At Secondary 2, however, though the non-attempt score is still high, the MUSTN'T error rate decreases considerably and the error of using MAY NOT becomes apparent. This continues across Secondary 3 and 4. At Secondary 5, however, the use of MAY NOT becomes a dominant error pattern. This can be explained by Secondary 5 students' active attitude in performing the task, for it can be seen that non-attempt rate is quite low at this point.

#### 5.5. Profile of Major Syntactic Errors and the Transfer Account

We have mentioned in the introduction (cf. p. 3) that in the present study we not only look at the choice of modal verbs expressing various modal meanings but also at the formation of modal verb phrases, for the simple reason that modal verbs as auxiliaries cannot function alone in a sentence but must be combined with the main verb to form the predicate. As is revealed, our students' ability to form target-like modal verb phrases is very poor. In the four syntactic areas respectively, some dominant errors can be found. But before we examine the developmental patterns and sources of these errors, let us first of all look at one interesting phenomenon in our data -- students do not, at any level, commit the error of inflecting the modal verb.



Throughout our TR data, we have found no cases where modal verbs are inflected. Not a single response has the modal auxiliary itself carry the third-person singular inflection -s or aspect inflection. Sentences like "That man MUSTS be the postman" or "He MAYING play basketball" have never appeared. Even when they were sensitive to the inflection requirement made of the verb in a sentence with a third-person singular subject, students never attached the -s inflection to the modal verb itself though it always occurs as the first element in the total verb phrase. What they did was to assign the inflection to the element immediately after the modal verb.

Putting the inflection on the element after the modal verb resulted in sentences like

His sister can swims.

He must has forgotten his key.

As we said in the literature review (cf. pp. 59-60), such ill-formed sentences are the outcome of intra-lingual transfer -- learners use their prior knowledge of L2 in their late learning. When he has learnt the rule that the verb should take the -s inflection if the subject is in the third person singular, he overgeneralizes the use of the rule in any sentences, including a modal one, where the inflection is not necessary. However, such type of intra-lingual transfer error, in our data, only occurs among a tiny number of students. So, we can say that this type of error does not constitute a learning problem. It may be



regarded as idiosyncratic.

Nevertheless, there are certain types of errors which are common and persistent. Among them, first of all, is the omission error of the copula after the modal verb. It was pointed out earlier that root modals do not occur with state verbs (cf. p. 22), so the copula, a state verb, is only used with epistemic modals. In our test design, we had two affirmative sentences (Items 22 and 32) and three negative sentences (Items 3, 14 and 35) containing the copula after the epistemic modal verb. The omission error of the copula is found in all these sentences at each secondary level (Tables 4.16 and 4.22).

Of course, copular omission appears not only in EFL learners but also in English-based pidgins and creoles as well as other varieties of English such as baby talk, foreigner talk and black English. While it may be regarded as a simplified register, in SLA it is treated as a learning error. If we trace the source of such an error, we may get several possible answers. To the present researcher, however, the transfer account seems more plausible. In other words, such an error is regarded as one caused by the interference from the Chinese learner's native language -- Chinese.

Ferguson (1971) points out that in all natural languages, there is grammatical machinery for equational clauses. With



reference to equational clauses, there are two main types of languages: one requires the presence of a copula in all normal neutral equational clauses and the other does not have this requirement. In the latter type of language, a copula is used in a limited number of situations. The English language, no doubt, belongs to the former type of language. Every equational sentence in English calls for the use of the copula except for some proverbs (e.g. Nothing ventured, nothing gained) (cited by Ferguson, 1971). The Chinese language, however, belongs to the latter type of language. In Chinese, if the complement in the equational clause is a noun, the copula is required. (e.g. Ta shi yiwei yisheng. He is a doctor.) If the complement is an adjective or prepositional phrase, the copula is normally absent (e.g. Ta hen gaoxing. He is very happy.) Now let us compare the five Chinese modal sentences in our TR task with the intended English translations.

1. a. Zhe ge bingren mingtian jianghui hao yixue.  
(This CL. patient tomorrow will good a little.)  
b. This patient WILL BE better tomorrow.
2. a. Nei nianqing ren kengding shi youdiyuan.  
(That young person certainly be postman.)  
b. That young man MUST BE a postman.
3. a. Ta youshi bu yiding zhengque.  
(He sometimes not certainly right.)  
b. Sometimes he MAY NOT BE right.
4. a. Nabilande nei ge ren kengding bu shi Tom.  
(There that CL. person certainly not be Tom.)



b. That man over there CAN'T BE Tom.

5. a. Ta      xianzai      bu      yingai      zai      bangongshi.  
       (He      now      not      should      in      office.)

b. He SHOULD NOT BE in the office now.

As can be seen, in each pair, while in Chinese only Sentences (2) and (4) which take nouns as the complement contain the copula, all the above five English sentences contain the copula. Because of the typological difference (if we divide the language types with reference to equational clauses), Chinese learners are likely to commit the omission error of the copula. The fact that students make far more omission errors when translating Sentences (1), (3) and (5) clearly shows the effect of L1 interference. It may further be assumed that such an omission error is, perhaps, more serious in the modal verb phrase than in the simple verb phrase. This is because in the modal verb phrase, the modal verb becomes salient and students tend to gear their attention to the selection of the modal verb. Once the modal verb is chosen, they think they have finished the task of supplying the verb for the sentence. Hence the high and persistent rate of such an error. Of course, this is merely a speculation.

It may be argued that since copular omission is also found in L1 acquisition and in L2 acquisition among learners with different language backgrounds, it is not unreasonable to count it as a developmental error. In fact, there is often an overlap



between transfer errors and developmental errors, and "a division of learners' errors according to whether they appear to originate from an L1 structure or L2-dependent rule construction has formed the mainstay of studies of L2 learner-language for over a decade" (Zobl 1980). However, as Zobl observes, "L2 structures that show influence from the L1 may in certain cases be more recalcitrant to restructuring". In other words, the use of the non-target L2 forms caused by L1 transfer is more protracted and such forms show "a tendency toward fossilization" (Zobl 1980).

Zobl has found evidence for his claim when reviewing Henkes' study. Henkes (1975) once examined the acquisition of English by three children whose native languages were Spanish, French and Arabic. Finding that copular omission occurred in the speech of all three children, she concluded that such an error could not be caused by L1 influence. However, Zobl points out that a closer look at Henkes' protocols reveals that with the Arabic child, whose mother tongue does not have present-time copula, the copula continues to occur variably well into the final period of observation when the other two children were using the copula consistently. So, it may be inferred that the protracted phenomenon of copular omission in the Arabic child is due to L1 transfer.

In our modal study, we have also found copular omission after the modal verb a protracted phenomenon. If we look at Table



4.16 (cf. p. 101) and Table 4.22 (cf. p. 106), we find that the percentage of the copular omission error rate is quite appreciable even at the last year of secondary schooling, Secondary 6 (10% in the unexpanded area and 15% the negated area), though there is a general decrease of the copular omission error rate from lower to higher levels.

Besides the omission error of the copula in the modal verb phrase, another major error type found in our data is the modal co-occurrence error. Table 4.23 (cf. p. 107) shows the developmental pattern across levels with respect to this error type in the unexpanded and negated areas.

To trace the source of the modal co-occurrence error is difficult. In fact, such an error can be assigned either as an error caused by interlingual transfer or an error resulting from intralingual transfer, i.e. overgeneralization. As we mentioned earlier (cf. 2.4.4), at the theoretical level, interlingual transfer is differentiated from intralingual transfer: in the former, the learner is using an L1 form or rule in place of the correct target language rule; in the latter, it is always a rule of the target language that is used in place of the correct target language rule. However, empirically, it is often a matter of controversy as to whether a certain erroneous form should be considered as an inter- or intra-lingual transfer. The modal co-occurrence error found in our data exemplifies such a



controversy.

First, we may regard it as an error due to interlingual transfer. In Chinese, one clause may contain more than one verb while in English only one main verb is allowed. So far as sentences containing modal verbs are concerned, the Chinese language allows, within the same clause, syntagmatic co-occurrence of some modal verbs, though not all. For example, such combinations as jiang (WILL) + hui (CAN) and keneng (MAY) + hui (CAN) are possible in Chinese whereas they are impossible in English. We can compare the following pair of Chinese and English sentences:

- a. Zhe ge yue di qian ta jiang hui  
 (This CL. month end before he WILL CAN  
 wanchen quanbu gongzhuo.  
 finish all work.)
- b. \* He WILL CAN have finished all the work by the end of  
 the month.

So, in Chinese, when there are two modal notions appearing at the same time in one clause, they can be stated directly with two modal expressions, no matter whether they are modal verbs plus modal adverbs such as kending + hui (CERTAINLY CAN) or they are both modal verbs, such as jiang + hui (WILL CAN). However, the English sentence permits the use of only one modal auxiliary in one clause. The other modal notion should either be expressed by lexical items other than modal verbs or be merged into the other modal verb, for example



Ta     mingtian     jiang keneng     lai.  
 (He     tomorrow     WILL     POSSIBLY     come.)

1. He POSSIBLY WILL come tomorrow.
2. He MAY come tomorrow.

In Sentence 2, the modal verb MAY covers the two modal notions of "futurity" and "possibility". Because of the existence of the modal co-occurrence rule in their native language, Chinese learners unconsciously transfer such a rule to their learning of the English language. Hence the errors like "He WILL CAN be better tomorrow" and "They WILL CAN'T give the book to him".

Both in Chinese and in English, the modal verb may be followed by the copula. However, the copula in Chinese does not distinguish between finite and non-finite forms whereas in English it does. After the modal verb, the copula in the English sentence must take its non-finite form BE. Because of the lack of such a restriction rule in their native language, some Chinese EFL learners in our study use the finite form of the copula after the modal verb, resulting in the co-occurrence error as exemplified in the sentence "That man over there MUST ISN'T Tom."

As can be seen, the modal co-occurrence error can be accounted for by interlingual transfer. Nevertheless, it may also be accounted for by intralingual transfer. In our data, such patterns as M+M+NOT, M+DON'T and M+ISN'T (Table 4.23) provides good evidence of it. It can be assumed that these



erroneous patterns possibly result from Chinese learners' prior knowledge of L2 rules. In their earlier learning of English, they might have acquired M+NOT, DO+NOT and IS+NOT as unanalysed wholes which serve the purpose of negating a sentence. Therefore, when another modal notion comes into the sentence, they just transplant the unanalyzed negative chunks into the sentence and put it after the modal verb. However, be it an inter- or intra-lingual transfer, it undergoes the same psychological process (cf. p. 60).

The last major modal syntactic error we have found in our data is the partial or total omission of progressive and perfective expansion, which is prevalent throughout the whole of secondary levels. Table 4.24 (p. 109) and Table 4.25 (p. 111) reveal the gravity of this error type.

Such an error, of course, may be accounted for by the fact that progressives and perfectives are structurally complicated, and thus marked, since they have more "morphological material" (Comrie 1976, p.114). When the modal notion comes in, it makes the formation of the modal perfective verb phrase even more difficult. Apart from this, we may add one more possible reason. That is the lack of syntactic aspect-inflection in Chinese. Though the Chinese language does have aspect (Li and Thompson 1981), it is not realized by syntactic devices as in English but by lexical items (27). So, the Chinese students are



not sensitive at all to the need of forming particular syntactic constructions M+BE-ING and M+HAVE-EN to indicate progressive aspect and perfective aspect respectively.

We have pointed out in our results that the error of omitting the modal progressive and perfective expansion is made at the sacrifice of the meaning of the sentence (p. 109 and p. 111). Owing to the omission, the resultant sentence usually deviates from the intended epistemic reading to the root reading. As a result, such sentences produced by our students are normally regarded as erroneous ones resulting from the confusion between epistemic and root meanings of the modal verbs. After our analysis, we wish to propose that such erroneous sentences should be considered as the outcome of the learner's inability to form the complex syntactic pattern rather than the learner's inability to tell the epistemic meaning from the root meaning.



## Chapter 6

### Conclusion

#### 6.1 Purpose fulfilled

Centering around the seven research questions posed at the beginning of the thesis (cf. p. 6), the present study has examined the development and use of the English modal auxiliaries in secondary school students in China, by taking, as a point of departure, the 11 modal notions proposed by Coates in her semantic framework of the relationship between modal forms and modal meanings. Now we have obtained some general ideas about the modal performance of Chinese EFL learners.

First of all, we know that as in other aspects of the English language, students are obviously learning the English modal auxiliaries over time. Their mastery of modal auxiliaries grows across levels and their use of modal forms progresses from less stable to relatively more so. It shows that SLA is a gradual process, though the pace of development may be great at certain stages and less so at others.

Secondly, we are aware that despite the progress students have made, the modal auxiliary system remains a difficult area for Chinese EFL learners. This has confirmed the claims made by



many researchers and linguists. The difficulty in modal usage lies both in the choice of modal forms and in the formation of target-like modal verb phrases, as our study has shown. So far as the choice of modal forms are concerned, not all the modal forms present problems. What seems to constitute greater problems is modal negation (cf. 4.2.2). Quite a few error types are found in this area. So far as the formation of the modal verb phrase is concerned, Chinese learners seem to have problems of various kinds. But there are certain types of errors that are dominant and persistent: omission of the copula after the modal auxiliary, modal co-occurrence, omission of the progressive M+BE-ING construction and the perfective M+HAVE-EN construction.

Thirdly, we get a tentative sequence of development in terms of modal meanings expressed by different modal forms, which we set out to investigate. Such a sequence tells us that Chinese EFL learners' mastery of epistemic modals is generally poorer than their mastery of root modals. So, it can be inferred that epistemic modals are more difficult than root modals. This coincides with the situation in L1 acquisition of the English modal auxiliaries. Possibly, two factors are related to this. One factor is that epistemic modals are cognitively more complex. Since it is more complex, it is more marked and hence mastered later. The other factor is that in the production task, the presence of various syntactic features establishes the complexity of modal sentences containing epistemic modals. Syntactic



features are simpler with root modals.

Lastly, we have discerned major error types in the use of English modal auxiliaries and have noted that most of the error types can be accounted for by the transfer consideration. Such transfer encompasses both interlingual and intralingual transfer. As a notion that has undergone reexaminations and modifications, language transfer is by no means insignificant. It does serve as one of the contributing factors for SLA.

## 6.2 Pedagogical Implications

To date, many articles have been written about the teaching of the English modal auxiliaries. Some are on the teaching of the whole modal system. For instance, Bending (1967) has prepared detailed practice materials for the teaching of the ten true modals CAN, COULD, MAY, MIGHT, WILL, WOULD, SHALL, SHOULD, MUST AND OUGHT TO as well as the functionally similar verbs, or quasi-auxiliaries USED TO, NEED, DARE, HAVE TO, BE TO and LET. All these modal auxiliaries or quasi-auxiliaries are treated with equal emphasis. Ney (1980) proposes that the English modal auxiliaries be taught deductively. In his framework, each of the modal verbs (However, he cites four only: MAY, CAN, MUST and SHALL) is divided into two different words, one in the epistemic sense and the other in the root sense. Then along this line, further steps are taken to yield the remote forms (MIGHT, COULD, MUST and SHOULD) and the negated forms.



Besides Bending and Ney, some practicing teachers have written articles on the teaching of particular modal auxiliaries: Barroso (1985) on the teaching of MUST, Prodromou (1983) on the teaching of MAY and MUST, etc. Here, after doing a study on Chinese EFL learners ability to use modal auxiliaires, we will offer, on the basis of the empirical evidence obtained, some pedagogical implications and make a few suggestions for the teaching of the English auxiliary system.

The first implication is that while the teaching of modal auxiliaries needs to be done in real earnest for they constitute a difficult area, not every modal form expressing a particular modal meaning should be given equal weight. Some modals are very easy to master, such as CAN expressing ability, WILL expressing volition, MUST expressing strong obligation and MAY expressing permission in all their affirmative meanings, so time and effort should not be wasted by asking learners to practise these forms associated with these meanings time and again. To make the teaching more effective and more economical, emphases should be placed, perhaps, on the items associated with the rest seven modal meanings: prediction, tentative inference, epistemic possibility, root possibility, tentative inference, confident inference and hypothesis.

The second implication concerns the negated modal forms.



Our study shows that negated modal forms clearly present greater learning difficulty than their affirmative counterparts, owing to the difference in the scope of negation and the interference from the native language. Hence, negated modal forms should receive special care and treatment. Our suggestion is, since there is an apparently fortuitous variability in the scope of negation for different modal verbs, it might be better to teach negated modal forms as separate lexical items. In fact, Miller and Kwilosz (1981) have advanced the same position. Though by so doing we will increase the number of lexical entries EFL learners have to learn, however, learning a slightly greater number of clearly-meant and non-confusing lexical items is perhaps easier and less pains-taking than learning a smaller number of lexical items which carry different, confusing meanings in different syntactic environments.

The third implication is that in the teaching of modal auxiliaries, attention should be paid not only to the modal forms themselves but also to the whole modal verb phrases. Our study has shown that students' ability to form target-like modal phrases is very low. Very often, they can choose the modal form correctly, but they are unable to form the correct modal phrase. Of course, their ability in this respect surely goes side by side with their overall proficiency. One cannot expect them to produce a well-formed modal verb phrase when they are not ready to create a correct simple verb phrase without a modal auxiliary.



However, even if students are able to produce target-like simple verb phrases, they may not be able to do so when the modal element comes in. So, we suggest, for instance, when modal verbs are followed by the copula, the modal verb phrase M+BE should be taught together to avoid possible errors of M+IS pattern or the copular omission. Also, concerning modal progressives and modal perfectives, it is proposed that students' attention should be called to the whole modal verb phrases of M+BE-ING and M+HAVE-EN.

The last implication is that the English modal auxiliaries are best taught in context. This is especially true for modal progressives and modal perfectives. As we have discovered in our study, students' performance is better in these two areas in the MC where the context is given. If the teacher can continuously supply mini-situations to arouse students' awareness of the progressive and perfective use of the English modal auxiliaries, students will, with the background of experience, be able not only to understand but also to assimilate the complex patterns of modal progressives and perfectives (Bowen 1980).

### 6.3. Limitations of the Present Study

First, because of the large scope of the present study which resulted from the inclusion of all the eleven modal meanings realized by the ten modal forms in the four syntactic environments, it was difficult to analyse every bit of the data



in detail. The analysis was thus dealt with in a superficial manner and the entire picture of modal usage was painted with a broad brush. Secondly, because of the incorporation of modal meanings and syntax in different syntactic areas, we had thirty five individual situations which were different from each other either in the use of modal forms or the syntactic environments. To each of these situations, only one test item was assigned. Though we sampled a large number of subjects (totalling 360) to get an adequate number of responses for one item, it would have been better, perhaps, to limit the scope a little and assign more items to individual modal situations. Thirdly, for fear of putting too heavy a burden on our students by asking them to translate too many sentences, we provided only mini-context in the TR task. Though we made an effort to state the modal meanings exactly and unmistakably to elicit the intended use of the modal form and our students did catch the intended meaning, it would have been better if more context had been supplied. Of course, in order not to defeat the purpose of the study, the sentences serving the purpose of contextualization should not be required to be translated.

There being no similar studies to date in SLA, we do not have a well-set analytical and explanatory framework. So, consequently, the conclusions offered here cannot but be general and tentative. They are by no means definitive.



#### 6.4. Suggestions for Future Research

A general and comprehensive study like the present one is no doubt necessary and informative. It gives us a global view of the modal usage in Chinese EFL learners. However, efforts should not cease at this level. Further detailed studies are suggested to address one particular aspect of the modal system at a time. In other words, while this study deals with the modal category in width, more studies are expected to deal with the modal category in depth. If the two can be combined, a better and more revealing picture can be obtained about the development and use of the English modal auxiliaries in SLA.



## Notes

1. Second language acquisition is sometimes contrasted with second language learning, as Krashen et al. has been doing. The contrast is made out of the assumption that acquisition and learning are different processes, the former being the process of picking up a second/foreign language subconsciously through exposure to that language whereas the latter the process of studying a second/foreign language consciously as in a formal learning setting. However, such a distinction has not so far been fully testified as necessary and still needs proof. So, for the moment, I will follow some linguists' steps and "keep an open mind about whether this is a real distinction or not" (Ellis 1985). In this thesis, therefore, "acquisition" and "learning" are used interchangeably.
2. Ever since the coinage of the term by Selinker in 1969, "interlanguage" has become a theoretical construct which underlies the attempts of SLA researchers to identify the stages of development in SLA. However, Davies et al. (1984) point out that interlanguage is used in two distinct ways. One is the general use in which interlanguage stands for any synchronic state of SLA. The other use is "more rigorous and concerns a particular hypothesis of SLA". This hypothesis states that learning a language is systematic, that the system is subject to universal language learning constraints and that there is an unchangeable sequence of learning. The present study employs the first general use.
3. It will be seen in the literature review (cf. p. 15 of the present thesis) that different linguists disagree on the issue concerning the membership of the English modal system. However, these ten modals are ever present in their analysis of the system.
4. The term is borrowed from Major (1974). As the term itself suggests, it refers to those "pure" modal forms not interacted with other syntactic patterns, hence not "expanded". In other words, they are the modal forms per se -- those that are present, positive, and active. Palmer (1974) calls them "basic" forms of the modals.
5. "Expanded" modals are opposed to unexpanded modals. They refer to modals interacted with other syntactic patterns such as tense-aspect, negation and voice. For example, MUST HAVE DONE, MUST NOT DO and MUST BE DONE are all expanded modals.



6. To my best knowledge, there is only one acquisition study on the English modal auxiliaries in SLA. It is done by Warbey (1986) for her doctoral dissertation. This cross-sectional study is concerned with the acquisition of modal notions by advanced EFL learners. Its main purpose is to examine advanced learners' pragmatic comprehension of modal auxiliaries. Since the purpose of Warbey's study is different from and not quite related to the present study, it is not reviewed here.
7. The term first came from J.R. Firth (1968, P. 104). Also called "avoidance of repetition" by H.E. Palmer and Bladgard (1939, pp.124-5), the term means that in the second part of a sentence, the whole verb phrase is not repeated. Instead, the full verb in the first part of the sentence is later substituted by the modal verb. Such a feature can often be found in the ...and so... pattern (e.g. He can swim and so can I) and in a short reply to a question (e.g. Yes, I can.).
8. I thank Dr. Thomas Lee for his comment on this syntactic criterion of modal auxiliaries. When I first listed this property as "No-cooccurrence", he pointed out that this was factually incorrect and that a clearer statement was needed. As generative grammarians have observed, sentences like "[People who must] can get up at 5 every day", which do have the co-occurrence of two modal verbs, are perfect sentences. So, with his advice, improvement has been made on the original version by adding the phrase "within the same clause".
9. Palmer (1986, p.103) holds a different view. As we have seen, Palmer makes a trio-set distinction. He maintains that though the distinction between epistemic and root modality "has the advantage that it avoids the necessity of distinguishing between 'pure' deontic and dynamic modality and so avoids the problems of indeterminacy", "the term 'root' is a little unfortunate if it is used to include all non-epistemic modality, with the implication that this is more basic. If any kind of modality is basic it is, surely, dynamic modality with its notions of willingness and ability..."
10. See P. Westney (1980), however, who mentions that the synonymous SHOULD and OUGHT TO can be, to some extent, distinguished.



11. Palmer (1979) points out that Quirk et al.'s distinction between "main verb negation" and "auxiliary negation" is misleading, for "formally it is the modal that is negated in both".
12. As for the grammatical status of keneng, we will see on Page 71 of this thesis that some Chinese grammarians regard it as modal auxiliary and other consider it an adjectival verb. However, this does not affect our discussion.
13. It is assumed that the basic notions of modality are those of possibility and necessity (cf. Lyons, 1977, p.787). In other words, the concept of possibility and necessity are central to modality. Epistemic possibility is distinguished from root possibility, the former being paraphrased as "it is possible that..." and the latter, "it is possible for...".
14. Similar to the case of epistemic possibility vs root possibility, epistemic necessity is opposed to root necessity, the former meaning "it is necessary that..." and the latter "it is necessary for...".
15. In Major's study, embedded Yes/No questions are questions like "Ask him if he must eat spinach while information questions are questions like "Ask him what he could do when he was little."
16. At the earlier stage of the test design for this study, a blank-filling task was in fact thought of and tried out but quickly given up, due to the consideration of the polysemous and polylexical nature of the English modal auxiliaries.
17. Leech (1969) points out that the hypothetical formator like WOULD does not generally occur except through the operation of contextual conditions. The most important context, by far, is that of conditional statements. In Chinese, we also employ such conditional statements as xuguo (if)... jiru (then)... to bring out the hypothetical meaning.
18. Coates' twelveth modal meaning "quasi-subjunctive" is not included in the present study because a) "should" in this sense is "semantically empty" (Coates 1983, p68) and therefore difficult to be elicited; b) "should" in this sense in subordinate that-clauses is common only in British English, not in American English (p.97). As the present study



concerns English in general , not only British English, the biased use of "should" is therefore not considered.

19. The SAS system, produced by SAS Institute Incorporation, is a software system for data analysis, whose statistical analysis procedures range from simple descriptive statistics to complex multivariate techniques. In this system, the linear model procedures are especially important, of which General Linear Model (GLM) is the "flagship".
20. The idea of using the +/- coding in the analytical framework was kindly suggested by Dr. Teresa Ching. Since we have included both the semantic and syntactic factors in the study, such a coding enables us to see clearly the subjects' modal performance in the semantic domain and the syntactic domain respectively.
21. I thank Dr. Joseph Hung for his suggestion of using this term. Though the alternative term "acquisition order" is generally used in L2 research, it is not quite appropriate in our study. First, it is difficult to decide when and under what circumstances a certain grammatical structure or linguistic form can be said to have been acquired. Second, different from most child language acquisition research which often survey the relative order of appearance of certain grammatical structures, we examine in this study Chinese EFL learners' modal performance on the basis of "correct-incorrect" analysis, i.e. their actual mastery of the modal auxiliaries. So, the term "mastery scale " is preferred.
22. To express the hypothetical meaning, there are four modals: WOULD, SHOULD, COULD and MIGHT, the first being "a general hypothetical marker" (Coates 1983, p. 228).
23. This refers to the internally negated strong obligation realized by MUSTN'T.
24. This refers to the externally negated strong obligation realized by NEEDN'T.
25. "Holophrastic" children refer to those at the single-word stage in language production and "telegraphic" children stand for those who begin to use two or more words in one utterance (Ingram 1974).



26. The term was suggested by Dr. Joseph Hung.
27. Li and Thompson (1981) distinguish four verbal aspects in Chinese: the perfective aspect realized by the word -le; the durative aspect realized by -zhe and -zai; the experiential aspect marked by -guo; and the delimitative aspect marked by the reduplication of the verb .



## Appendix I

## The Elicitation Test

亲爱的朋友:

以下的试题是为了解中国学生学习英语的情况而设计的, 它是我哲学硕士论文的一部分.

试题共分两个部分. 第一部分是中译英试题, 第二部分是多项选择题. 每部分试题正式开始前都有说明, 告诉你该怎么做, 并附有例子. 你可不必在试卷上留下自己的名字, 但务必写上你所在的年级和班级, 并务请书写清楚. 谢谢你的帮助和协作, 并祝你好运!

## 第一部分

在这一部分里, 你将看到三十五句中文句子, 请你准确领会每句的中文意思, 然后将它们译成正确的英文句子. 这个练习不是为了测试你的词源和拼写, 因此如有疑难的词源和不熟的拼写, 你们可以猜. 请在三十五分钟内完成.

例如: 你现在可以离开这里了.

You may leave here now.

1. 他的妹妹会游泳.
2. 玛丽(Mary)可能喜欢这个颜色.
3. 他有时不一定正确.
4. 你可以这样做.



5. 玲玲不會講英語。
6. 他可能仍在學校打籃球。
7. 我們明天將去公園。
8. 他一定忘帶鑰匙了。
9. 他今天下午兩點將在上課。
10. 如果沒有你的幫助，他現在就可能仍在做功課。
11. 他們不可以把書帶出圖書館。
12. 他們將不會把書借給他。
13. 她現在應該收到我的信了。
14. 那邊的那個人肯定不是湯姆(Tom)。
15. 他可能把鑰匙留在辦公室(office)了。
16. 我明天有可能來。
17. 如果沒有你的幫助，他昨天就遲到了。
18. 他們應該是互相認識的。
19. 他昨天本來可以坐公共汽車來。
20. 如果我是你，我今天下午就將去。
21. 這個月底前他將會完成全部工作。
22. 這個病人(patient)明天將會好一些。
23. 你本應該早一些來。



24. 他們明天不必來。
25. 你現在不得出去。
26. 我明天將碰不到他。
27. 他必須馬上離開這裏。
28. 小孩子不該吃太多的糖 (sugar)。
29. 我沒有小汽車。如有，我今天下午就不坐公共汽車去。
30. 我妹妹肯定又在彈鋼琴了。
31. 你應該洗一下你的手。
32. 那個年輕人肯定是郵遞員。
33. 他這個時候應該在吃晚飯。
34. 你現在不可能見到他。
35. 已是八點了，他不應該在辦公室。

## 第二部分

這個部分共有三十五道多項選擇題。每題中有一分句沒有動詞詞組。請你仔細閱讀所給的四個詞組，在其中選擇一個語法上和意義上最符合上下文的詞組，並在旁邊打上✓。你只能選擇一個答案。若選了兩個，這題就算錯。請你在二十五分鐘完成這部分。

For example: I've learnt English for six months, so I

\_\_\_\_\_ some English now.

- a) can speak
- c) could speak

- b) must be speaking
- e) should speak



1. Her sister \_\_\_\_\_ but she never does, because she once was nearly drowned (淹死) and now she is afraid of water.
  - a. could swim
  - b. would swim
  - c. will be swimming
  - d. can swim
2. Mary \_\_\_\_\_ the colour of the dress. However, I'm not quite sure about that..
  - a. must like
  - b. may like
  - c. can like
  - d. would like
3. Don't believe every word he says. Sometimes, he \_\_\_\_\_ right.
  - a. mustn't be
  - b. can't be
  - c. might not be
  - d. should not be
4. If you want to leave the room, you \_\_\_\_\_ do so.
  - a. may be doing
  - b. could have done
  - c. will do
  - d. can do
5. Linlin has been learning English for six months, but she still \_\_\_\_\_ it.
  - a. may not speak
  - b. couldn't speak
  - c. shouldn't be
  - d. can't speak
6. If you want to find Peter, you'd better go to the playground. He \_\_\_\_\_ basketball there.
  - a. may be playing
  - b. might play
  - c. can possibly play
  - d. would be playing
7. We don't mind whether it rains or not. We \_\_\_\_\_ to the park anyway.
  - a. would go
  - b. shall go
  - c. might be going
  - d. may be going
8. Mr. Smith has just opened the window of his house and is climbing (爬) inside. He \_\_\_\_\_ his key.
  - a. must forget
  - b. should have forgotten
  - c. would forget
  - d. must have forgotten
9. The opening ceremony (开幕式) will start at 2:00 this afternoon, but I don't think he can see it because at that time \_\_\_\_\_ his class.
  - a. will have
  - b. could be having
  - c. will be having
  - d. would have















## Appendix II

### Key to the Elicitation Test

#### PART ONE

1. Her sister can swim.
2. Mary may/could/might like this colour.
3. He sometimes may/might/could not be right.
4. You may/can do so.
5. Linlin can't speak English.
6. He may/might/could be playing basketball there.
7. We shall/will go to the park tomorrow.
8. He must have forgotten his keys.
9. He will be having his class at two this afternoon.
10. Without your help, he might/could/would still be doing his homework.
11. They can/may not take the books out of the library.
12. They will not give him the book.
13. She should/ought to have received my letter.
14. That man cannot/can't be Tom.
15. He may/might/can have left his keys in the office.
16. I may/might/can/could come tomorrow.
17. Without your help, he would have been late yesterday.
18. They should/ought to know each other.
19. He could have come by bus yesterday.
20. If I were you, I would go and see him this afternoon.
21. He will have finished all the work before the end of the



month.

22. The patient will be better tomorrow.
23. You should/ought to have come earlier.
24. They needn't come tomorrow.
25. You mustn't go out now.
26. I shall/will not have a chance to meet him tomorrow.
27. He must leave here immediately.
28. He should/ought not to eat too much.
29. I have no car. If I had one, I would not take the bus.
30. My sister must be playing the piano now.
31. You should/ought to wash your hands.
32. That man must be the milkman.
33. He should/ought to be having his supper.
34. You can't see him now.
35. It is eight. He should/ought not to be in his office now.

## PART TWO

- |      |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|
| 1. d | 6. a  | 11. a | 16. a | 21. b | 26. a | 31. c |
| 2. b | 7. b  | 12. b | 17. c | 22. c | 27. d | 32. a |
| 3. c | 8. d  | 13. c | 18. a | 23. a | 28. d | 33. c |
| 4. d | 9. c  | 14. d | 19. b | 24. c | 29. a | 34. b |
| 5. d | 10. b | 15. c | 20. d | 25. d | 30. b | 35. a |



### Appendix III

#### Instructions for the Elicitation Test (Translated into English)

Dear Friends,

The following test is designed to investigate the English learning situations in Chinese students. It is part of my M.Phil. thesis.

The test is composed of two parts. The first part is translation from Chinese into English. The second part is multiple choice task. At the beginning of each part, you are given instructions as to how to do each task. You are also given examples illustrating the ways you should do the test. You may or may not write down your name on the test paper, but please do write down the school year or class that you are in. Please write clearly. Thank you for your help and cooperation. AND WISH YOU GOOD LUCK! THANK YOU!

#### PART ONE

In this part of the test, you will have 35 Chinese sentences. Please make sure that you understand the meaning of every sentence before you translate them into correct English. This test is not meant to check your vocabulary or spelling, and therefore, if you have any difficult words or unfamiliar spelling, you can make guesses. Please finish this part within 35 minutes.



## PART TWO

In this part of the test, there are 35 items for multiple choice exercise. In one of the clauses in each item, the verb phrase is taken out. Please read carefully the four verb phrases given in each item and choose the one that best completes the clause both in meaning and syntactic structure. Put a tick (✓) beside your choice. Only one answer is allowed. If two answers are given, zero score will be considered. Please finish this part within 25 minutes.



**Appendix IV****考試須知 (Instructions for the Administration of the Test)**

**各位監考老師：**

**請告訴學生：**

1. 希望他們解答所有的題目，發揮自己的最好水平；
2. 第一和第二部分完成的時間分別為三十五分鐘和二十五分鐘。
3. 如果初一和初二的同學來不及做，可以延長二十分鐘，每部分各十分鐘。
4. 第一部分做完後，請把試卷交上來。第二部分會接著發給他們。
5. 請毋使用詞典或書本，請毋互相討論。

**謝謝你的幫助！**



## Appendix V

## Instructions for the Administration of the Test (English Version)

Dear Invigilators,

Please tell the students that

1. they are expected to complete all the items and give their best performance;
2. the time limit for Part I and Part II of the test is 35 minutes and 25 minutes respectively;
3. if students of Secondary 1 and Secondary 2 cannot finish the test in time, an allowance of another 20 minutes can be given, 10 for each part;
4. after the first part is done, they are required to hand in their papers and the second part will then be distributed to them;
5. no dictionaries or textbooks can be consulted, no explanation of the test items will be given and no discussion is permitted.

THANK YOU FOR YOUR HELP!



## Appendix VI

## Total Scores for the Choice of Modal Forms and the formation of Modal Verb Phrases

## (1) The Correct Choice of Modal Forms (%)

	1	2	3	4	5	6
Unexpanded	47	63	68	76	79	82
<b>+M</b> Negated	29	32	47	57	59	67
Progressive	34	50	55	64	68	72
Perfective	17	37	46	63	67	65

## (2) The Incorrect Choice of Modal Forms (%)

	1	2	3	4	5	6
Unexpanded	32	20	24	18	17	16
<b>-M</b> Negated	37	41	38	37	36	32
Progressive	37	30	36	31	29	28
Perfective	44	29	34	28	28	33

## (3) The Formation of Target-like Modal Verb Phrases (%)

	1	2	3	4	5	6
Unexpanded	65	69	78	84	88	93
<b>+T</b> Negated	49	56	72	81	85	91
Progressive	07	25	29	19	28	40
Perfective	00	06	06	27	14	34



(4) The Formation of Non-target-like Modal Verb Phrases (%)

	1	2	3	4	5	6
Unexpanded	14	14	14	11	08	05
—T Negated	17	18	13	13	11	08
Progressive	64	55	62	76	69	60
Perfective	61	60	74	64	81	64

(5) The Non-attempts in Modal Performance (%)

	1	2	3	4	5	6
Unexpanded	21	17	08	05	04	02
○ Negated	34	26	15	06	04	01
Progressive	29	20	09	05	03	00
Perfective	39	34	20	09	05	02



## Appendix VII

## A Sample Score Sheet

### Senior 3 Students' Scores

[illegible]



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